Attachment 10

GEOTECHNICAL ASSESSMENT REPORT

Rainbow Disposal Co., Inc.
17121 Nichols Street
Huntington Beach, California

prepared for

Rainbow Disposal Co., Inc.
17121 Nichols Street
Huntington Beach, California

January 16, 2006

Project No. 217-E

prepared by

environ strategy consultants, inc.

30 Hughes, Suite 209
Irvine, California 92618
tel 949.581.3222
fax 949.581.3207

TABLE OF CONTENTS

TABLE OF CONTENTS i
1.0 INTRODUCTION 1
2.0 SCOPE OF WORK 1
3.0 SITE DESCRIPTION 2
3.1 Site Geologic Conditions 3
3.1.1 Regional Geology 3
3.1.2 Site Seismic Hazards Potential 3
4.0 SUBSURFACE INVESTIGATION 4
4.1 Drilling and Sampling Methodology 4
4.2 Laboratory Testing 5
4.2.1 Water Content and Density Determination 5
4.2.2 Direct Shear Tests 5
4.2.3 Expansion Index 5
4.2.4 Consolidation Tests 6
4.2.5 Other Testing 6
4.3 Seismic Considerations 6
4.3.1 Fault Rupture 6
4.3.2 Ground Shaking 7
4.3.3 Liquefaction 7
4.3.4 Lateral Spreading 8
4.3.5 Seismic Settlement 8
4.3.6 Tsunamis 8
5.0 ENGINEERING RECOMMENDATIONS 8
6.0 GEOTECHNICAL RECOMMENDATIONS 9
6.1 Site Preparation 9
6.2 Grading 10
6.3 New Transfer Station 11
6.4 Concrete Slab-on-Grade 11
6.7 Erosion Control 12
6.8 Temporary Debris Fence 12
6.9 Utility Trenches 12
7.0 CONCLUSION 13

TABLE OF CONTENTS (Continued)

FIGURES

1	Site Location Map
2	Current Site Plan
3	Geotechnical Boring Location Map

APPENDICES

A	Subsurface Exploration (Boring) Logs
B	Test Program and Chain-of-Custody Records
C	Bulk Density and Moisture Results
D	Direct Shear Results
E	Expansion Index Results
F	Incremental Consolidation Results

1.0 INTRODUCTION

This report presents the results of the geologic and geotechnical engineering investigation conducted by Environ Strategy Consultants Inc. (Environ Strategy) for the proposed construction of a building at Rainbow Disposal Company, Inc. (Rainbow) located at 17121 Nichols Street in Huntington Beach, California (Figure 1). The most current architectural plans include construction of a new transfer station building to be located in the southwest corner of the site (Figures 2 and 3). Plans are also being reviewed for future expansion of the maintenance and administration buildings, the addition of compressed natural gas (CNG) fueling facilities, and a new welding building, bin storage area, and truck scales. This report only includes the evaluation and recommendations for the new transfer station facility.

The new transfer station and associated drive through tunnel, will consist of a metal building approximately 70,000 square feet in size and about 30 feet in height. The building will have an entrance and exit ramp leading to a loading pit at a depth of 18 feet below surrounding ground surface. Grading for the project will consist of minor cuts and fills to prepare the ground surface for new concrete slab-on-grade, and the deep excavation for the truck ramp leading to the loading pit.

The purpose of this report is to evaluate surface and subsurface conditions and ascertain the engineering properties of the materials encountered during the subsurface exploration. Based on these findings we have provided geologic and geotechnical recommendations for the design and construction of the new transfer station structure.

This report has been prepared to obtain building and planning approval from the City of Huntington Beach. This report is based on preliminary site plans developed from information and equipment selection provided by the Rainbow staff or their project managers.

2.0 SCOPE OF WORK

For this geotechnical engineering investigation, we performed the following tasks:

1. Reviewed information relevant to the proposed site and surrounding areas available in our files and the City of Huntington Beach.

2. Reviewed published geologic maps to assess geologic and geomorphic conditions at the site and adjacent areas.

3. Explored, sampled, and classified subsurface earth materials by means of soil borings performed in the areas of the proposed structures. Soil samples were visually classified in the field by a degreed geologist under the oversight of a

State-Certified Geologist and transported to a geotechnical laboratory for evaluation and testing.

4. Performed a review of the soil samples and selected the applicable laboratory testing to determine pertinent index and engineering properties. The following laboratory tests were performed:

   a. In-situ water content (American Society for Testing and Materials D2216)
   b. In-situ bulk density tests (ASTM D2937)
   c. Direct shear strength determination (ASTM D3080)
   d. Expansion Index (ASTM D4829)
   e. Consolidation (ASTM D2435)

5. Performed relevant geotechnical analysis for the proposed project, including:

   a. Peak ground acceleration determination
   b. An evaluation of seismic hazards at the site, including the potential for fault rupture, liquefaction, lateral spreading, and seismic settlement
   c. Bearing capacity analysis
   d. Determination of equivalent fluid pressures for any retaining wall design
   e. An evaluation of potential foundation settlement
   f. Temporary excavation analysis

6. Reviewed and analyzed research information and laboratory results to determine appropriate design parameters and recommendations for the proposed construction.

7. Based on the above tasks, prepared this report presenting our findings and conclusions, as well as, preliminary geotechnical recommendations for: earthwork, grading, foundation design, retaining walls, utility trenches, and advice on the geotechnical aspects of surface drainage.

3.0 SITE DESCRIPTION

Rainbow currently occupies 17.59 acres of land located at 17121 Nichols Street within the City of Huntington Beach of Orange County, California (Figure 1). The site property is located 500 feet south of Warner Avenue and is bounded by Nichols Street on the East and the Southern Pacific Railroad on the West. The site latitude and longitude are 33° 42' 51.8" North and 117° 59' 44.9" West and the site elevation is approximately 29 feet above mean sea level (AMSL).

The property currently operates as an active permitted waste transfer and material recycling facility with a household hazardous materials collection center and an overall processing capacity of 2,800 tons per day. The hours of operation for receiving and

transferring waste are 6:00 AM to 6:00 PM Monday through Sunday. However, the facility processes waste 24 hours per day over 360 days per year. Site access is through several entrances off of Nichols Street. Existing site structures illustrated on Figure 2 include an administration building, a vehicle repair shop, a welding shop, a material recycling facility (MRF), a transfer building, a fuel dispenser island, two guard shacks, office trailer, several storage trailers, and canopies. A former two-story building that occupied the location of the proposed transfer station in the southwest corner of the site has been removed (Figure 2).

3.1 Site Geologic Conditions

3.1.1 Regional Geology

The proposed project site is located in the City of Huntington Beach. The subject site is situated within the central block of the Los Angeles physiographic basin, a coastal alluviated lowland lying between the Newport-Inglewood fault zone and the Anaheim fault zone, surrounded by the mountains and hills of the Transverse and Peninsular Ranges geomorphic provinces. More specifically the subject site is located on the Huntington Beach Mesa just south of the Downey Plain. The Huntington Beach Mesa terrain consists of a stratified sequence of marine and non-marine sedimentary rocks which range from Cretaceous to Pleistocene in age. The subsurface conditions within the property consist of sand, gravel, silt, and clay of the lower Pleistocene San Pedro formation. This is overlain by a stratified sequence of nonfossiliferous continental sand, terrace deposits, fossiliferous marine Palos Verdes sand, and unnamed deposits of silt, sand, and gravel.

According to the U.S. Department of Agriculture's Soil Conservation Service STATSGO data, soils within the subject site are greater than 10 inches in thickness. Soils consist of a silty to gravelly loam with clay, sand, and gravel. Deeper soils are reported to be stratified sand, gravel, and clay loams overlying weathered bedrock. No information on the specific hydrologic group, infiltration rates, drainage, water holding capacity, and corrosion potential of site soils could be located.

3.1.2 Site Seismic Hazards Potential

The City of Huntington Beach is located in the seismically active region of Southern California and several active faults are located within and near the city. The subject site is not located within an Alquist-Priolo (AP) Special Studies zone and no evidence was found of faults traversing the site. However, the subject site is located near the North Branch of the Newport Inglewood AP Earthquake Fault Zone, according to the State of California Special Studies Zones Map. The AP Earthquake Fault Zones are regulatory zones that encompass identifiable surface traces of active faults, defined as having measurable displacement during the last 11,000 years (Holocene period), and considered to have a potential for future surface fault rupture. The main trace of the North Branch of the Newport Inglewood AP fault is located approximately two miles west of the subject

site. The northwest trending Newport Inglewood fault is approximately 75 kilometers long and runs from Culver City parallel to the coastline to below Newport Beach where it heads off-shore and becomes the Newport Inglewood-Rose Canyon Fault. It is a right lateral fault with an estimated slip rate of 0.6 millimeters per year. The most recent major rupture occurred on March 10, 1933 and was measured as a magnitude 6.4. Estimated possible magnitudes for future ruptures on this fault are between magnitudes 6.0 and 7.4. Other Holocene faults within 20 miles of the project include the Palos Verdes, Whittier, and Elsinore faults. The Palos Verdes fault parallels the coast about 10 miles west of the site. The south trace of the Whittier Fault connects to the Elsinore Fault and both are approximately 20 miles northeast of the site. Other inactive (Quaternary) trace faults, Los Alamitos and Peralta, are located within 10 miles of the property to the north.

4.0 SUBSURFACE INVESTIGATION

4.1 Drilling and Sampling Methodology

Field exploration was performed on September 12 and 13, 2005. Environ Strategy retained Al-Roy Drilling Incorporated to perform 14 soil borings in six (6) areas of interest across the site. The approximate locations of the borings performed in the proposed transfer station site on the southwest corner of the facility are illustrated on Figure 3. Concrete coring was required prior to drilling at most of the selected locations, since approximately three quarters of the site is overlain by thick concrete. The drill rig encountered refusal in four of the borings due to subsurface structures related to the previous building (see Figure 2).

Soil samples were collected at 5-foot intervals for submittal to a geotechnical laboratory. A California sampler was used to obtain relatively undisturbed samples of the alluvial deposits and bedrock materials in accordance with ASTM D3350. The sampler consisted of a 3-inch outer diameter, 2.44-inch inner diameter split barrel that was driven a total of 12-inches into the materials at the bottom of the drill hole. The sample material was retained in capped 6-inch long brass rings and placed in plastic bags for transport to the laboratory for testing. Sample materials remaining in the waste barrel and sampler shoe were used to assist in classifying the materials in accordance with Unified Soil Classification System (USCS) by a degreed geologist overseen by a State-Registered Geologist. The boring logs, presented as Appendix A, record the lithologic description. The remaining soil cuttings were used as backfill.

Samples collected with the California sampler were driven into the bottom of the drill hole with the effective weight of the Kelly bar on the hollow stem auger drill rig. The approximate length of the fall, the weight of the bar, and the number of blows per foot of the driving record were recorded in the field. The total number of blows required to drive the sampler 12-inches are recorded on the Subsurface Exploration Logs, included in Appendix A.

Several large bulk samples (approximately 5 gallons) were also collected from the drill hole spoil piles and placed in plastic buckets and sealed for transportation to the laboratory.

4.2 Laboratory Testing

Laboratory tests were performed on representative undisturbed samples to determine engineering properties and indices of the materials encountered. The tests were performed in accordance with the latest edition of ASTM Standards for Soil Testing. An engineering geologist reviewed all samples returned to the laboratory prior to scheduling the laboratory testing. A copy of the Test Program form and the field Chain-of-Custody forms are enclosed in Appendix B.

4.2.1 Water Content and Density Determination

In-situ water content and density tests were performed on select, undisturbed samples in accordance with ASTM D2216 and D2937. The soil moisture content ranged from 7 % to 48.7 % by weight. The results of the water and density testing are presented in Appendix C.

4.2.2 Direct Shear Tests

Multi-stage direct shear tests were performed on select samples to determine the consolidated drained shear strength of a specimen in accordance with ASTM D3080. Each shear strength test consists of three samples tested at varying normal loads to determine the effects upon shear resistance and displacement, and strength properties. Undisturbed samples were loaded into the shear box, a normal load applied, then water added. The sample was allowed to sit until the proper amount of consolidation was achieved and then shear tested. The samples were sheared in a motor driven, strain controlled, direct shear testing machine. The cohesion results range from 135 psf (pounds per square foot) to 280 psf and the angle of internal friction ranges from 22.9 to 32.2 degrees. The results of the peak and ultimate values from the tests are presented in Appendix D.

4.2.3 Expansion Index

An Expansion Index (E.I.) test was performed on a near surface clay sample to evaluate the expansion potential in accordance with ASTM D4829. The test result is presented in Appendix E. The test result can be compared with the table presented on the next page to qualitatively evaluate the expansion potential for the near surface materials.

Expansion Index	Potential Expansion
0 – 20	Very Low
21 – 50	Low
51 – 90	Medium
91 – 130	High
Over 130	Very High

The near surface clay materials at the north end of the Rainbow Facility are considered to be in the high expansion range (E.I. = 107+). Soils at the proposed transfer station location have a higher sand content and therefore will have a lower expansion index.

4.2.4 Consolidation Tests

Multi-staged consolidation tests were performed on selected samples to determine their consolidation and expansion characteristics in accordance with ASTM D2435. An undisturbed sample was loaded into the consolidation machine, a normal load applied, then water added. Increasing loads were applied to a selected load threshold, with the amount of consolidation recorded for each load. The normal load was then removed and the amount of rebound was recorded. The consolidation test results are presented in Appendix F.

4.2.5 Other Testing

In addition to the above geotechnical laboratory testing, corrosivity tests and chemical analysis testing are recommended. If high strength concrete is used then the tests may not be necessary, however, for the lean mix in soldier piles, it might be advisable to run two or three water soluble sulfate tests. These tests were not performed at this time since the soils that will be used for the subsurface grades have not been selected yet.

4.3 Seismic Considerations

The proposed site is located within the seismically active Southern California, however, it is not within a Special Studies Zone. Forecasting the number, frequency, or magnitude of earthquakes that may occur during the lifespan of the proposed project cannot be done reliably. However, the project designers and property owners should assume that a major earthquake will occur sometime within the next 50 years and that measures should be taken to address the potential for damage due to the following geologic hazards associated with seismic events.

4.3.1 Fault Rupture

An earthquake is generally caused when movement along a plane of weakness in the rocks releases strain energy in rocks. Movement along the plane of weakness typically propagates upward through the subsurface materials and is manifested at the surface as

surface rupture. In some cases, the propagation does not reach the surface and is referred to as a blind fault. Surface rupture usually occurs along the traces of known active or potentially active faults. There are, however, many historic seismic events in Southern California that have occurred on unknown faults or faults that were not considered to be active.

No known active or potentially active faults or splays are known to cross the proposed site.

4.3.2 Ground Shaking

As noted above, the proposed site is approximately two (2) miles east of the main trace of the North Branch of the Newport Inglewood AP fault, and may experience strong ground motion if an earthquake occurs on this or any other nearby principle late Quaternary faults. The Southern California Earthquake Center has recently released information indicating that seismic risk at most sites in southern California is higher from local, possibly unknown faults than for known, large regional faults (i.e. San Andreas Fault).

As mentioned above, the number and frequency of earthquakes that may occur during the lifespan of the proposed project cannot be reliably predicted. It is probable, however, the proposed site will experience a large earthquake during the operational time of this project. The potential effects of seismic activity depend on several factors such as: the severity and duration of ground shaking, the type or mechanism of faulting, depth of the focal point, the type of structure involved, and local topography. The effects of ground shaking may include structural damage, underground tanks and/or utilities may be uplifted or fail, and blockage of access roads. Also, broken utility lines could result in fires, contamination of water services, and the cut off of services.

4.3.3 Liquefaction

Other Seismic Hazards at the subject property include the potential for liquefaction. Liquefaction occurs when saturated, cohesionless soils transform from a solid to a liquid state as a result of increased pore pressure and reduced effective stress during severe ground shaking. A soil's potential for liquefaction during an earthquake event is dependent upon several factors. These factors include but are not limited to: magnitude and proximity to an earthquake, duration of shaking, subsurface soil types, grain size distribution, clay content, density, angularity, effective overburden, elevation of groundwater table, cyclic loading, and soil stress history.

The City of Huntington Beach is underlain by shallow, near surface water, which poses some potential for liquefaction within depths of 1 to 50 feet, and hazards to construction within depths of 30 feet. Based on our review of the existing subsurface soil and groundwater conditions, and considering the in place density of these soils, there is a very low potential for liquefaction of the materials underlying the site.

4.3.4 Lateral Spreading

Lateral spreading is the result of a subsurface layer that has undergone a transformation to a fluidized mass where gravity and inertial forces cause the layer to move in a downhill direction. Studies have shown that a slope as little as 5% may have lateral movement with seismic activity.

Based on the type and density of the materials, and the depth of groundwater encountered, there is a very low potential for lateral spreading at the proposed site in the event of a severe seismic event.

4.3.5 Seismic Settlement

Seismic ground settlement occurs under a structure in which cohesionless materials, typically fine to medium sands, are present below the groundwater table. As a result of ground shaking and the development of higher pore water pressures, the cohesionless soils become loose, resulting in ground subsidence.

Based on the clayey soils encountered at the site, there is a very low potential for seismically induced foundation settlement.

4.3.6 Tsunamis

Tsunamis are oceanic waves that may be generated by earthquakes, submarine volcanoes, or large submarine landslides. The only means of avoiding damage by a tsunami is to avoid development in low lying areas exposed to the ocean.

Due to the elevation of the proposed site improvements and the distance of approximately three (3) miles from the ocean, damage to the improvements is considered unlikely in the event of a tsunami.

5.0 ENGINEERING RECOMMENDATIONS

A preliminary geologic and geotechnical engineering investigation has been performed for the proposed new transfer building at the Rainbow Disposal Company Inc. located at 17121 Nichols Street in Huntington Beach, California. This report has been prepared for planning approval from the City of Huntington Beach and for preliminary design.

The preliminary geotechnical concern at the proposed site is geologic hazards associated with seismic activity. The proposed site will likely be subjected to severe ground shaking during the life span of the proposed improvements. We estimate strong ground shaking for a maximum probable event for the proposed site to be on the order of 20 to 40 seconds.

For the 1997 Uniform Building Code (UBC) seismic design, the following parameters should be used:

Seismic Zone Factor	Seismic Source Type	Soil Profile Type	Near Source Factor (Na)	Seismic Coefficient (Ca)	Near Source Factor (Nv)	Seismic Coefficient (Cv)
0.40	B	S_B	1.3	0.40Na	1.6	0.40Nv

The property owners and project designers should note that the UBC values and design parameters are presented as minimum values, and are not intended to prevent damage, but only to prevent catastrophic collapse and to minimize risk to human life.

Based upon our review of the site and available data, the proposed improvements are feasible from a geologic and geotechnical standpoint, assuming the recommendations presented in this report are implemented during the design and construction of the project.

6.0 GEOTECHNICAL RECOMMENDATIONS

The following preliminary recommendations, which are presented as guidelines to be used by the project designers, have been prepared assuming that Environ Strategy and their subcontractors will review a complete set of plans prior to construction and observe all construction activities. Once final plans have been prepared, additional recommendations may be necessary for the proposed project.

The specifications in this section present general procedures and requirements for grading and earthwork as shown on the site grading plan, and anticipated for overall construction of the proposed project. Recommendations contained in this report should be considered a part of the project specifications. Evaluations performed by Environ Strategy and their subcontractors during the course of grading may result in new recommendations that could supercede the specifications or recommendations of this report. It shall be the responsibility of the contractor to provide adequate equipment and construction methods to accomplish the work in accordance with the applicable grading codes or agency ordinances, these specifications, and the approved grading plans.

6.1 Site Preparation

Areas of the site to be built upon, paved, or excavated should be stripped to remove any surface debris, vegetation, and organic topsoil. Soil containing more than two percent by weight of organic matter should be considered an organic soil and is not suitable for use in structural fill. Stripping depths should be determined in the field. However, for planning purposes, an average stripping depth of four inches may be assumed. Stripping

materials may be reused in landscaping areas as designated by the project architect or should be hauled offsite.

6.2 Grading

Excavated soils from the truck ramp and drilled piles are considered suitable for reuse as structural fill and should be stockpiled if there is a need for raising site grades on this project. The suitability of the materials should be determined in the field by the project geotechnical engineer at the time of excavation. Alternatively, these materials may be suitable for on-site landscaping as necessary. On-site, as well as any imported soil proposed for use as structural fill, should be inorganic, free from deleterious materials, and should contain no more than fifteen percent by weight of rocks larger than four inches (largest dimension) and no rocks larger than six inches.

For planning purpose of estimating earthwork quantities, it may be assumed that 85 to 90 percent of the excavated materials should be suitable for re-use as structural fill. The on-site soils are clayey and will require careful control of moisture during placement and compaction of these fine grained soils.

The surface exposed by stripping and excavation activities should be scarified to a depth of 8 inches, water conditioned to produce a moisture content of about 1 to 3 percent above optimum value, then compacted to a minimum of 90 percent relative compaction based on the ASTM test D1557-91. If artificial fill is encountered it should be excavated until native soils are exposed. Proposed fill materials should be thoroughly mixed and processed to achieve consistent moisture content with a well-mixed, uniform consistency. Fill materials should be reasonably free of large soil lumps or clods, and the fill surface free of uneven features that would inhibit compaction efforts. Care should be made to ensure that fill materials are not over-watered. Wet sub-grade conditions must be removed, dried and/or mixed with drier materials, and re-compacted prior to acceptance of the fill materials.

Areas designated to receive fill may then be brought up to design grades. Structural fill using the on-site inorganic soils or approved import, should be placed in less than eight inch thick layers (before compaction), water conditioned and compacted as specified above. All fill material should be compacted with a sheep foot roller or similar equipment. Compaction using rubber tire equipment will not be acceptable.

Compaction tests should be performed during fill placement operations to verify that the required degree of compaction is obtained. Due to the shallow depths of fill planned for this site, field density tests should be performed on every other lift and as directed by the field engineer.

6.3 New Transfer Station

Proposed foundations for the transfer station structure will consist of a combination of drilled piles and spread footings that will carry the column loads expected to reach 100 kilo-pounds. Drilled soldier piles will be required for support of the vertical cuts required for the ramp that will reach a depth of approximately 18 feet below existing grade. Some of these piles will be used for direct support of the column loads while providing lateral support for the temporary cut. Consideration should be given to using drilled piers at the remaining column locations since drilling equipment will be on-site and available for installing these pier footings.

Soldier piles will consist of drilled holes with a vertical steel beam or reinforcement designed to retain the full height of the vertical cuts. Pile diameters are expected to range from two to three feet and the spacing will probably range from six to eight feet depending on slope height and level of reinforcement. Pile depths should extend at least 20 feet below the bottom of the concrete ramp if they are to carry the column loads of about 100 kilo-pounds. Minimum pile diameter should be 24 inches for these loading conditions. Settlement of the drilled pier footings should be less than ½ inch.

Design of the soldier piles should be based on an active earth pressure of 40 pcf (pounds per cubic foot) for a level backfill condition. Resistance to temporary lateral earth pressures can be provided by passive earth pressure below the base of the pile using a design value of 300 pcf. Additional lateral resistance will be available when the concrete ramp slab has been poured.

Spread footings should be designed for an allowable soil bearing value of 3,000 psf (pounds per square foot) based on the results of consolidation and shear strength test data. Estimated settlement of 6x6 foot square footings under the anticipated structural loads will be about one inch with about half of this settlement occurring during construction of the transfer building. This bearing value may be increased by one third to account for temporary seismic or wind loading on the structure.

6.4 Concrete Slab-on-Grade

The proposed concrete floor slab in the transfer building will be carrying heavy equipment loads that we understand will be transient and not permanent. We recommend that this reinforced concrete slab be underlain by a minimum 12 inch thick compacted granular fill that is compacted to 95% of its maximum density as determined by the D1557-91 test method. The granular imported fill should consist of a crushed clean gravel with less than three percent silt content and a maximum grain size of one and a quarter inches.

Structural design of this slab should be based on a soil subgrade modulus of 150 pci (pounds per cubic inch), which considers the modulus of the compacted native soils (100

pci) and the modulus of the compacted gravel fill blanket (300+ pci). An allowable sliding friction factor of 0.65 may be used for the gravel-concrete interface.

6.7 Erosion Control

Materials that underlie the site are prone to erosion. If construction takes place during the winter months or raining periods, the contractor should coordinate necessary winterizing and erosion control measures.

In general, site management practices for all equipment storage, entry areas, re-fueling, as well as, erosion control and prevention should be in accordance with the State of California's Best Management Practices (BMPs) as outlined for Storm Water Pollution Prevention Plans (SWPPP) in the *California Storm Water Best Management Practice Handbook.* In addition, BMPs specified in the report entitled *Pollution Control Objectives for Construction Sites and Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters* (EPA Jan. 1993) are also applicable.

6.8 Temporary Debris Fence

A temporary debris fence should be installed along the perimeter of the building pad during any site excavation or fill placement operations performed during the winter months. The intent of the fencing is to minimize offsite sedimentation and to control erosion during heavy rain storm activity.

6.9 Utility Trenches

Vertical trench excavations less than 5 feet deep should be capable of standing with minimal shoring and bracing for short construction periods. Trenches five feet or greater should be provided with more substantial shoring and bracing for the protection of workers in the trench. Contractors should refer to the State of California Construction Safety Orders for "Excavations, Trenches, and Earthwork" for minimum specifications and guidelines.

Bedding is defined as material placed in a trench up to 1 foot above a utility pipe and backfill is all material in the trench above the bedding. Unless concrete bedding is required around the utility pipes, free-draining sand should be utilized as bedding. Sand proposed for use in bedding should be tested in a laboratory to verify its suitability and to measure its compaction characteristics. Sand bedding should be evaluated by ASTM Tests D4283-83 and D4284-83.

Approved, on-site, inorganic soil, or imported material may be used as utility trench backfill. If imported material is proposed for use as trench backfill, a sample of it should be tested and approved by the project engineer before any is delivered to the site.

Proper compaction of trench backfill will be necessary under and adjacent to structural fill, building foundations, concrete slabs and vehicle pavement. In these areas, backfill should be conditioned with water to produce a soil-water content of about one to three percent above optimum value and placed in horizontal layers not exceeding six inches in thickness (before compaction). Each layer should be compacted to at least 90 percent relative compaction based on ASTM Tests D1557-91. The upper 12 inches of trench backfill under vehicle pavement should be compacted to at least 95 percent relative compaction.

Where any trench crosses the perimeter foundation line of any building, the trench should be completely plugged and sealed with compacted on-site clay soil for a horizontal distance of two feet on either side of the foundation.

7.0 CONCLUSION

The conclusions and recommendations presented in this report are based on research, site observations, and a limited subsurface investigation. Although no significant variations in subsurface conditions are anticipated, the possibility of variations cannot be ruled out. Evaluations performed by Environ Strategy or their contractors during the course of grading may result in new recommendations that could supercede the specifications or recommendations of this report.

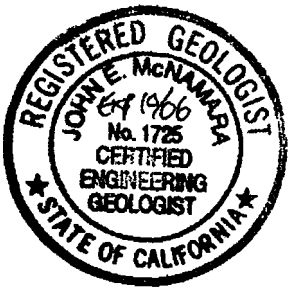
This report has been prepared in accordance with generally accepted professional engineering principles and practice. No warranties of future site performance are intended, expressed, or implied.

Environ Strategy is pleased to have been of service to our client and the involved regulatory agency. If you have any questions or require additional information, please do not hesitate to contact the undersigned at (949) 581-3222.

Respectfully submitted,
Environ Strategy Consultants, Inc.

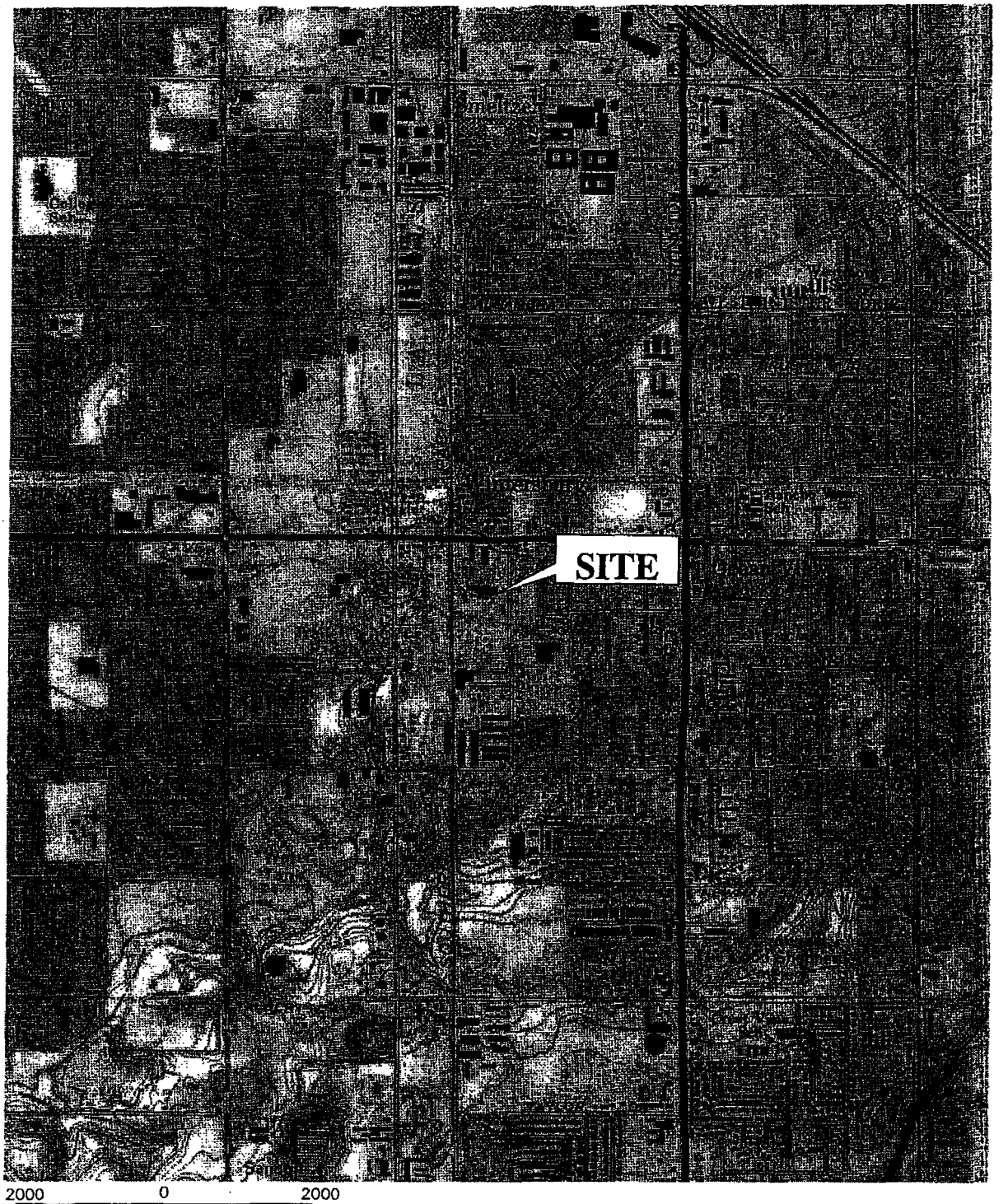
John E. McNamara, R.G. 4863/ C.E.G. 1725
Principal Engineering Geologist

Margaret Patrick, R.G. 7620
Project Geologist



FIGURES

Attachment 10



ENVIRON STRATEGY CONSULTANTS, INC. 30 Hughes, Suite 209 Irvine, California 92618	FIGURE 1 SITE VICINITY MAP RAINBOW DISPOSAL 17121 NICHOLS ST. HUNTINGTON BEACH, CA	DATE: 06/10/04 PROJECT NO. 281–A FILE NO. 281AFig1

SOUTHERN PACIFIC RAILROAD

NICHOLS STREET

B-7 B-6 B-5 B-4

PROPOSED TRANSFER STATION

B-9 B-8 B-3

RAMP

LOADING AREA

B-10 B-1 B-2

RAMP

PROPERTY LINE

LEGEND

B-9 REFUSAL

B-5 BORING

NORTH

0 40 80 FEET

FN: RAINBOW-BORINGS.dwg
DATE: 9/12 - 13/05
BGB
PLOT SCALE: 1" = 80'

environ strategy consultants, inc.

30 HUGHES STE. 209 IRVINE, CA 92618 (949) 581-3222

		APPROVALS		
SECTION HEAD				
PROJECT MANAGER				
INSPECTION				
SURVEY CONTROL		DIVISION ENGINEER	DATE	
PROPERTY LINES				
GAS		CONSTRUCTION SERVICES OFFICER	DATE	CITY ENGINEER DATE
WATER				
FIRE DEPARTMENT		CITY TRAFFIC ENGINEER	DATE	

RAINBOW DISPOSAL COMPANY INC.

17121 NICHOLS STREET
HUNTINGTON BEACH, CALIFORNIA

DESIGNED BY: M. PATRICK	
DRAWN BY: B. BERTSCH	
DESIGN CHECK BY: J. MCNAMARA	
DRAFTING CHECK BY:	FIELD BOOK / PAGE
GRAPHIC SCALE 0 0.5 1	AS-BUILT:

FIGURE 3
GEOTECHNICAL BORING LOCATION MAP

REVISIONS			
No.	DATE	SHEET	APPROVAL

NO. R-

JOB NO. 217-E

SHEET 1 OF 1

DRAWING NO.

N

PACIFIC ELECTRIC RAILWAY

AREA C

AREA B

AREA A

BENT MANUFACTURING

FORMER VACANT BUILDING LOCATION

RAMP

RAMP

CONSTRUCTION DEBRIS AND GREENWASTE STAGING AREA

PROPOSED TRANSFER BUILDING LOCATION

MAINTENANCE STORAGE BUILDING

OFFICE BUILDING LEASED BY BUDGET

LEASED PARKING LOT

HOUSEHOLD HAZARDOUS WASTE ENCLOSURE

GUARD SHACK

PARKING AREA

HHW ENTRANCE

NICHOLS STREET

CONVEYOR BELT

MATERIALS RECYCLING FACILITY

SUMPS

RAMP

CANOPY

BIN REPAIR SHOP

PAINT BOOTH

SUMPS

TRANSFER BUILDING

HAND LOAD DROP OFF AREA

CONVEYOR BELT

RAMP

TRUCK WASH BAY

VEHICLE REPAIR SHOP

OFFICE TRAILER

WALL

ADMINISTRATION

GATE

PARKING AREA

SITE ENTRANCES

OAK VIEW SCHOOL

FORMER ORANGE COUNTY ICE WATER PRODUCTION WELL

FUEL DISPENCING ISLAND AND VAULTED FUEL TANKS

FORMER COOLING TOWER

BIN STORAGE AREA

GATE

DRAINAGE SWALES

TRASH TRUCK PARKING AREA

PARKING AREA

GUARD SHACK

VACANT LAND

CEMENT BLOCK STORAGE

RESOURCES BUILDING MATERIALS

WARNER AUTO CENTER

MAINTENANCE BUILDING AND WELDING SHOP

A BANDONED HOIST

STORAGE

TRUDELL MOVING AND STORAGE

DISCOUNT TIRE CENTER AND AUTOMOBILE FACILITY

US RENTALS

warner

LEGEND

- Property Line
- Fence
- Clarifier
- Pad Mounted Transformer
- Former Underground Storage Tanks
- Pole Mounted Transformer

100 0 100

APPROXIMATE SCALE IN FEET

DATE: 06/11/04	ENVIRON STRATEGY CONSULTANTS, INC.	FIGURE 2 SITE PLAN
PROJECT NO. 281-A	30 Hughes, Suite 209 Irvine, California 92618	RAINBOW DISPOSAL 17121 NICHOLS ST. HUNTINGTON BEACH, CA
FILE NO. 281aFig2a		

APPENDIX A

environ strategy consultants, inc. es

BORING/WELL ID NUMBER: B-1

SUBSURFACE EXPLORATION LOG

CLIENT: Rainbow Disposal
PROJECT NUMBER: 217E
LOCATION: 17121 Nichols Street Huntington Beach, CA
SURFACE ELEVATION:

GEOLOGIST: Margaret Patrick / LAWRA (Orig.)
DATE DRILLED: September 12, 2005
DRILLING COMPANY: Al-Roy Drilling Inc.
NORTHING:

TOTAL DEPTH: 50 ft
DRILLING METHOD: Hollow stem auger
SAMPLE METHOD: split spoon / 140 lb. hammer
EASTING:

Depth (ft)	Samples	Time (24 hr)	Sample Number	FID/PID (ppm) Sample	FID/PID (ppm) Breathing Zone	Blow Count	Recovery (ft)	% gravel	% sand	% non-plastic fines	% plastic fines	Lithologic Name	Color	Moisture	Density	Consistency	Plasticity	Angularity	Max. grain size	grading	Additonal Modifiers	Soil Class. Symbol	Lithologic Contact (ft bgs)
												8" asphalt, ALLUVIUM CLAY,	Brown	SI moist	–	firm	med			med		CL	
5	XXX		B-1/SPT-1	8.6	<5	5 5 7	1.5																
	XXX		B-1/SPT-2	<5	<5							CLAY	Brown	dry-damp	–	Stiff	low			poor		CL	
10	XXX					4 9 12	1.5																
	XXX		B-1/SPT-3	<5	<5							CLAYEY SILT	light brown	SI moist		Stiff	low			fr		ML	
15	XXX					4 7 10	1.5																
	XXX		B-1/SPT-4	Rock Sample								SAME AS ABOVE								p		ML	
20	XXX			<5	<5	4 10 10	1.5																
	XXX		B-1/SPT-5									SILT, some fine sand (6-inch layer), over SILT	light brown	SI moist	–	Stiff	non		fn	med		ML	
25	XXX					3 10 14	1.5															SP-SM ML	
30			(continued)																				

Notes:

	> 1/4 inch	visible -1/4 in.	visible with hand lens	not visible	See USCS flow Charts. Describe sand and gravel grading, ie, fine to coarse grained	Use Munsell color chart if available	Dry Moist Wet	Course: v. loose loose md. dense dense	Fines: v. soft soft md. Stiff v.stiff hard	high med low non	A Sa Sr R	in inches	poorly vs. well	odor, staining, minerology, stucture, cementation,

Attachment 10

environ strategy consultants, inc. es

SUBSURFACE EXPLORATION LOG

BORING/WELL ID NUMBER: B-1

CLIENT: Rainbow Disposal
PROJECT NUMBER: 217E
LOCATION: 17121 Nichols Street Huntington Beach, CA
SURFACE ELEVATION:

GEOLOGIST: Margaret Patrick / Laura Crow
DATE DRILLED: September 12, 2005
DRILLING COMPANY: Al-Roy Drilling Inc.
NORTHING:

TOTAL DEPTH: 50 ft
DRILLING METHOD: Hollow stem auger
SAMPLE METHOD: split spoon / 140 lb. hammer
EASTING:

Depth (ft)	Samples	Time (24 hr)	Sample Number	FID/PID (ppm) Sample	FID/PID (ppm) Breathing Zone	Blow Count	Recovery (ft)	% gravel	% sand	% non-plastic fines	% plastic fines	Lithologic Name	Color	Moisture	Density	Consistency	Plasticity	Angularity	Max. grain size	grading	Additonal Modifiers	Soil Class. Symbol	Lithologic Contact (ft bgs)
30	XXX		B-1/SPT-6	<5	<5	16 10 14	1.5					SILT, w/ small size gravel (< 1 inch diameter) over CLAY, sl plastic	light brown	sl moist		Stiff	non			med	oxidation staining, mottled; gravel sub angular	ML CL	ML CL
35	XXX		B-1/SPT-7	<5	<5	11 13 19	1.5					SAND, V.fn to fine grained Sand, poorly graded	yellowish brown	moist to sat.	Md dense				fn	P	fining upward from med grained to very fn grained	SP	
40	XXX		B-1/SPT-8	<5	<5	9 25 14	1.5					SAND, med grained Sand, poorly graded	yellowish brown	Sat	dense				med	P		SP	
45			no sample collected (wash up) too much water			—	0					—		Sat							Wash-up in Sampler - small amount of sand (same as above)	SP	
50			no sample collected			—	0					—		Sat							9 ft sluff-SAND.	SP	

Notes: Groundwater encountered at approximately 37.5 feet. Total depth = 50 ft. Boring backfilled with native soil.

	> 1/4 inch	visible -1/4 in.	visible with hand lens	not visible	See USCS flow Charts. Describe sand and gravel grading, ie, fine to coarse grained	Use Munsell color chart if available	Dry Moist Wet	Course: v. loose loose md. dense dense	Fines: v. soft soft md. Stiff v.stiff hard	high med low non	A Sa Sr R	in inches	poorly vs. well	odor, staining, minerology, stucture, cementation,		

Attachment 10

environ strategy consultants, inc. es

BORING/WELL ID NUMBER: B-2

SUBSURFACE EXPLORATION LOG

CLIENT: Rainbow Disposal
PROJECT NUMBER: 217E
LOCATION: 17121 Nichols Street Huntington Beach, CA
SURFACE ELEVATION:

GEOLOGIST: Margaret Patrick / Laura Strow
DATE DRILLED: September 12, 2005
DRILLING COMPANY: Al-Roy Drilling Inc.
NORTHING:

TOTAL DEPTH: 40 ft
DRILLING METHOD: Hollow stem auger
SAMPLE METHOD: split spoon / 140 lb. hammer
EASTING:

Depth (ft)	Samples	Time (24 hr)	Sample Number	FID/PID (ppm) Sample	FID/PID (ppm) Breathing Zone	Blow Count	Recovery (ft)	% gravel	% sand	% non-plastic fines	% plastic fines	Lithologic Name	Color	Moisture	Density	Consistency	Plasticity	Angularity	Max. grain size	grading	Additonal Modifiers	Soil Class. Symbol	Lithologic Contact (ft bgs)
												GEOLOGIC DESCRIPTION											
0												8" Asphalt over Alluvium. CLAY	brown	Sl moist	—	Stiff	low			md	hand augered to 5'. mottled.	CL	
5	X		B-2/R-1		<5	9 20 30	1.5					CLAY	brown	Sl moist		Stiff	low			P		CL	
10	X		B-2/R-2		<5	7 15	1.5					SILT, trace V. fn grained Sand	brown	Sl. moist					V. fn	P		ML	
15	X		B-2/R-3		<5	7 16	1.5					Silt, trace V. fn grained sand	light brown	Sl. moist		Stiff				P		ML	
20	X		B-2/R-4		<5	9 15	1.5					SILT, OVER SAND, V. fine grained, poorly graded	light brown	moist	Md dense					P		SM SP	
25	X		B-2/SCT-1		<5	6 15 20	1.5																
			(continued)																				

Notes:

	> 1/4 inch	visible -1/4 in.	visible with hand lens	not visible	See USCS flow Charts. Describe sand and gravel grading, ie, fine to coarse grained	Use Munsell color chart if available	Dry Moist Wet	Course: v. loose loose md. dense dense	Fines: v. soft soft md. Stiff v.stiff hard	high med low non	A Sa Sr R	in inches	P poorly vs. well W	odor, staining, mineralogy, stucture, cementation,		

Attachment 10

environ strategy consultants, inc. ES

BORING/WELL ID NUMBER: B-2

SUBSURFACE EXPLORATION LOG

CLIENT: Rainbow Disposal
PROJECT NUMBER: 217E
LOCATION: 17121 Nichols Street Huntington Beach, CA
SURFACE ELEVATION:

GEOLOGIST: Margaret Patrick
DATE DRILLED: September , 2005
DRILLING COMPANY: Al-Roy Drilling Inc.
NORTHING:

TOTAL DEPTH: 40
DRILLING METHOD: Hollow stem auger
SAMPLE METHOD: split spoon / 140-lb. hammer
EASTING:

Depth (ft)	Samples	Time (24 hr)	Sample Number	FID/PID (ppm) Sample	FID/PID (ppm) Breathing Zone	Blow Count	Recovery (ft)	% gravel	% sand	% non-plastic fines	% plastic fines	Lithologic Name	Color	Moisture	Density	Consistency	Plasticity	Angularity	Max. grain size	grading	Additonal Modifiers	Soil Class. Symbol	Lithologic Contact (ft bgs)
30	XX		B-2/SPT-2	Bulk Sample B-2	<5	7 12 12	1.5					SILT, trace v. fn grained Sand, over CLAY, mixed plasticity	light brown	SL moist		Stiff	med		vf fn	P		SM CL	SM CL
35	XX		B-2/SPT-3		<5	8 13 19	1.5					SAND, fn grained Sand, poorly graded.	yellowish brown	wet	md dense	-			fn	P		SP	
40	XX		B-2/SPT-4		<5	13 27 26	1.5					SAND, fn-med grained, poorly graded	yellowish brown	Sat	Md dense	-			med	P		SP	
												Notes: Total depth : 40 feet Ground water encountered at approx. 37 feet boring backfilled with native soil											

Notes: Ground water encountered during driving @ approx. 37 ft.

> 1/4 inch	visible -1/4 in.	visible with hand lens	not visible	See USCS flow Charts. Describe sand and gravel grading, ie, fine to coarse grained	Use Munsell color chart if available	Dry Moist Wet	Course: v. loose loose md. dense dense	Fines: v. soft soft md. Stiff v.stiff hard	high med low non	A Sa Sr R	in inches	poorly vs. well	odor, staining, minerology, stucture, cementation,

Attachment 10

environ strategy consultants, inc. es

SUBSURFACE EXPLORATION LOG

BORING/WELL ID NUMBER: B-3

CLIENT: Rainbow Disposal
PROJECT NUMBER: 217E
LOCATION: 17121 Nichols Street Huntington Beach, CA
SURFACE ELEVATION:

GEOLOGIST: Margaret Patrick / Laura Skow
DATE DRILLED: September 12, 2005
DRILLING COMPANY: Al-Roy Drilling Inc.
NORTHING:

TOTAL DEPTH: 25 ft
DRILLING METHOD: Hollow stem auger
SAMPLE METHOD: split spoon / 140 lb hammer
EASTING:

Depth (ft)	Samples	Time (24 hr)	Sample Number	FID/PID (ppm) Sample	FID/PID (ppm) Breathing Zone	Blow Count	Recovery (ft)	% gravel	% sand	% non-plastic fines	% plastic fines	Lithologic Name	Color	Moisture	Density	Consistency	Plasticity	Angularity	Max. grain size	grading	Additonal Modifiers	Soil Class. Symbol	Lithologic Contact (ft bgs)
												12" Asphalt & Concrete over dark brown CLAY, SL moist, med plasticity.									hand auger to 5'		
5			B-3/R-1		45	14 28	1.5					CLAY,	brown	SL moist		V. Stiff	Med			P		CL	
10			B-3/R-2		<5	10 28	1.5					CLAY	brown	SL moist		V. Stiff	med			P		CL	
15			B-3/R-3		<5	7 20	1.5					CLAY, OVER SILT	light brown	SL moist		Stiff	low			P	Silt micaceous	CL	
20			B-3/SPT-1		<5	7 10 19	1.5					SILT, trace V. fn grained sand with SAND, V. fn grained, interbed.	light brown	SL moist		Stiff	low		V. fn	P	Sand interbed approx 4 in. thick, poorly graded	ML SP ML	
25			B-3/SPT-2		<5	6 7 19	1.5					CLAYEY SILT,	light brown	SL moist		Stiff	low			P		ML	

Notes: Total depth = 25 feet
Groundwater not encountered during drilling
boring backfilled with native soil

> 1/4 inch	visible -1/4 in.	visible with hand lens	not visible	See USCS flow Charts. Describe sand and gravel grading, ie, fine to coarse grained	Use Munsell color chart if available	Dry Moist Wet	Course: v. loose loose md. dense dense	Fines: v. soft soft md. Stiff v.stiff hard	high med low non	A Sa Sr R	in inches	poorly vs. well	odor, staining, minerology, stucture, cementation,

Attachment 10

environ strategy consultants, inc.

SUBSURFACE EXPLORATION LOG

BORING/WELL ID NUMBER: B-4

CLIENT: Rainbow Disposal
PROJECT NUMBER: 217E
LOCATION: 17121 Nichols Street Huntington Beach, CA
SURFACE ELEVATION:

GEOLOGIST: Margaret Patrick / Laura Strom
DATE DRILLED: September 12, 2005
DRILLING COMPANY: Al-Roy Drilling Inc.
NORTHING:

TOTAL DEPTH: 22 ft
DRILLING METHOD: Hollow stem auger
SAMPLE METHOD: split spoon / 140 lb hammer
EASTING:

Depth (ft)	Samples	Time (24 hr)	Sample Number	FID/PID (ppm) Sample	FID/PID (ppm) Breathing Zone	Blow Count	Recovery (ft)	% gravel	% sand	% non-plastic fines	% plastic fines	Lithologic Name	Color	Moisture	Density	Consistency	Plasticity	Angularity	Max. grain size	grading	Additonal Modifiers	Soil Class. Symbol	Lithologic Contact (ft bgs)
5												6" Asphalt & concrete over, CLAY	dk brown	sl moist	-		med			p	hand augered to 5'	CL	
7			B-4/R-1		25	2 6	1.5					SILTY CLAY, trace v. fn grained sand	brown	sl moist	-	firm	Med		v. fn	p	Microcrack	CL	
12			B-4/R-2		15	10 22	1.5					CLAY, mottled	brown	sl moist	-	Sl. firm	mor			p	Small angular gravel (< 1/2 inch diam)	CL	
17			B-4/R-3		15	9 23	1.4					SILT, trace v. fine grained sand	light brown	sl moist	-	Stiff	non		v. fn	p		ML	
22			B-4/SPT-1		15	4 8 14	1.5					CLAY	light brown to orange-ish brown	moist		Stiff	med			p	oxidation staining	CL	
25																							

Notes:
- Total depth = 22 ft
- no groundwater encountered during drilling
- boring backfilled with native soil

	> 1/4 inch	visible -1/4 in.	visible with hand lens	not visible	See USCS flow Charts. Describe sand and gravel grading, ie, fine to coarse grained	Use Munsell color chart if available	Dry Moist Wet	Course: v. loose loose md. dense dense	Fines: v. soft soft md. Stiff v.stiff hard	high med low non	A Sa Sr R	in inches	poorly vs. well	odor, staining, mineralogy, stucture, cementation,		

Attachment 10

environ strategy consultants, inc. es

BORING/WELL ID NUMBER: B-5

SUBSURFACE EXPLORATION LOG

CLIENT: Rainbow Disposal
PROJECT NUMBER: 217E
LOCATION: 17121 Nichols Street Huntington Beach, CA
SURFACE ELEVATION:

GEOLOGIST: Margaret Patrick / Laura Skow
DATE DRILLED: September 12, 2005
DRILLING COMPANY: Al-Roy Drilling Inc.
NORTHING:

TOTAL DEPTH: 25 feet
DRILLING METHOD: Hollow stem auger
SAMPLE METHOD: split spoon / 140 lb hammer
EASTING:

Depth (ft)	Samples	Time (24 hr)	Sample Number	FID/PID (ppm) Sample	FID/PID (ppm) Breathing Zone	Blow Count	Recovery (ft)	% gravel	% sand	% non-plastic fines	% plastic fines	Lithologic Name	Color	Moisture	Density	Consistency	Plasticity	Angularity	Max. grain size	grading	Additonal Modifiers	Soil Class. Symbol	Lithologic Contact (ft bgs)
												Asphalt & concrete over,									hand auger to 5 ft		
5			B-5/R-1		45	11 18	1					CLAY,	brown	SL Moist		Stiff	Med			f		CL	
10			B-5/R-2		45							CLAYEY SILT OVER	brown	SL.		Stiff	low			f		ML	
				Bulk Sample		4 12	1					CLAY.		Moist								CL	
15			B-5/R-3									CANDY SILT, V. fn grained sand	light brown	Moist		V. Stiff				f			
				B-5	45	18 27	1																
			B-5/SPT-1									mud with silt, over-	light brown	SL		Stiff				f	mottled		
20					45	7 15 25	1.5					CAPPY, V. fn-fr grained sand mostly rounded.		Moist	med dense				fn.			CL SP	CL SP
25			B-5/SPT-2		45	11 15 25	1.5					SILT, trace v. fn grained sand.	light brown	moist		Stiff			fn	p	micaceous	ML	

Notes: TD= 25 feet
groundwater not encountered during drilling
borings backfilled with cement.

> 1/4 inch	visible -1/4 in.	visible with hand lens	not visible	See USCS flow Charts. Describe sand and gravel grading, ie, fine to coarse grained	Use Munsell color chart if available	Dry Moist Wet	Course: v. loose loose md. dense dense	Fines: v. soft soft md. Stiff v.stiff hard	high med low non	A Sa Sr R	in inches	poorly vs. well	odor, staining, minerology, stucture, cementation,

Attachment 10

environ strategy consultants, inc. es

BORING/WELL ID NUMBER: B-6

SUBSURFACE EXPLORATION LOG

CLIENT: Rainbow Disposal
PROJECT NUMBER: 217E
LOCATION: 17121 Nichols Street Huntington Beach, CA
SURFACE ELEVATION:

GEOLOGIST: Margaret Patrick / Laura Skow
DATE DRILLED: September 12, 2005
DRILLING COMPANY: Al-Roy Drilling Inc.
NORTHING:

TOTAL DEPTH: Refusal
DRILLING METHOD: Hollow stem auger
SAMPLE METHOD: split spoon / 140 lb hammer
EASTING:

Depth (ft)	Samples	Time (24 hr)	Sample Number	FID/PID (ppm) Sample	FID/PID (ppm) Breathing Zone	Blow Count	Recovery (ft)	% gravel	% sand	% non-plastic fines	% plastic fines	Lithologic Name	Color	Moisture	Density	Consistency	Plasticity	Angularity	Max. grain size	grading	Additonal Modifiers	Soil Class. Symbol	Lithologic Contact (ft bgs)
			Refusal				0					6" Asphalt & concrete over, CLAYEY FILL Refusal encountered at 1.5 ft									hand auger concrete @ 1.5 feet		
5												notes: B-6 relocated original location too close to trees. Boring relocated 3 feet south. - Location abandoned due to refusal at 1.5 ft bgs - Relocated 3 feet east, Refusal also encountered at 1.5 ft. Location abandoned. - Groundwater not encountered during drilling - Total depth 1.5 ft.											
10																							
15																							
20																							
Notes:								> 1/4 inch	visible -1/4 in.	visible with hand lens	not visible	See USCS flow Charts. Describe sand and gravel grading, ie, fine to coarse grained	Use Munsell color chart if available	Dry Moist Wet	Course: v. loose loose md. dense dense	Fines: v. soft soft md. Stiff v.stiff hard	high med low non	A Sa Sr R	in inches	poorly vs. well	odor, staining, minerology, stucture, cementation,		

Attachment 10

environ strategy consultants, inc.

SUBSURFACE EXPLORATION LOG

BORING/WELL ID NUMBER: B-7

CLIENT: Rainbow Disposal
PROJECT NUMBER: 217E
LOCATION: 17121 Nichols Street Huntington Beach, CA
SURFACE ELEVATION:

GEOLOGIST: Margaret Patrick / Laura Skow
DATE DRILLED: September 12, 2005
DRILLING COMPANY: Al-Roy Drilling Inc.
NORTHING:

TOTAL DEPTH: 25 ft
DRILLING METHOD: Hollow stem auger
SAMPLE METHOD: split spoon / 140 lb hammer
EASTING:

Depth (ft)	Samples	Time (24 hr)	Sample Number	FID/PID (ppm) Sample	FID/PID (ppm) Breathing Zone	Blow Count	Recovery (ft)	% gravel	% sand	% non-plastic fines	% plastic fines	Lithologic Name	Color	Moisture	Density	Consistency	Plasticity	Angularity	Max. grain size	grading	Additonal Modifiers	Soil Class. Symbol	Lithologic Contact (ft bgs)
												3" asphalt over.											
												CLAY, angular gravel < 1 inch diameter over,	dk brown	SI moist			med	Sa			fill material	CL	
5			B-7/R-1		45	7 13	1.5					CLAY	brown	SI moist		stiff	med			med		CL	
10			B-7/R-2		45	7 24	1.5					CLAY, over.	light brown	SI moist	-	stiff	med	Sa		med	gravel < 0.5 inch diameter		
				Full Sample B-7								Fine-grained silt with trace small rounded subangular,											CL - ML
15			B-7/R-3		45	7 24	1.5					SILT	light brown	SI moist		stiff	low			P		ML	
					45	7 15	1.5																
20			B-7/SPT-1									Sand v. fn to fngrnd	light brown	SI moist	dense				fn	F		SP	
					45	9 17 20	1.5					fine, rounded											
25			B-7/SPT-2									Silt, trace v. fn sand.	light brown	SI moist		firm			v. fn	P	micaceous	ML	
					45	5 7 10	1.5					OVER, CLAYEY SILT										CL	

Notes:
- Total depth = 25 ft.
- Groundwater not encountered during drilling
- boring backfilled with native soil

	> 1/4 inch	visible -1/4 in.	visible with hand lens	not visible	See USCS flow Charts. Describe sand and gravel grading, ie, fine to coarse grained	Use Munsell color chart if available	Dry Moist Wet	Course: v. loose loose md. dense dense	Fines: v. soft soft md. Stiff v.stiff hard	high med low non	A Sa Sr R	in inches	poorly vs. well	odor, staining, minerology, stucture, cementation,		

environ strategy consultants, inc. es

SUBSURFACE EXPLORATION LOG

BORING/WELL ID NUMBER: B-8

CLIENT: Rainbow Disposal
PROJECT NUMBER: 217E
LOCATION: 17121 Nichols Street Huntington Beach, CA
SURFACE ELEVATION:

GEOLOGIST: Margaret Patrick / Laura Glcow
DATE DRILLED: September 12, 2005
DRILLING COMPANY: Al-Roy Drilling Inc.
NORTHING:

TOTAL DEPTH: 2 ft
DRILLING METHOD: Hollow stem auger
SAMPLE METHOD: split spoon
EASTING:

Depth (ft)	Samples	Time (24 hr)	Sample Number	FID/PID (ppm) Sample	FID/PID (ppm) Breathing Zone	Blow Count	Recovery (ft)	% gravel	% sand	% non-plastic fines	% plastic fines	Lithologic Name	Color	Moisture	Density	Consistency	Plasticity	Angularity	Max. grain size	grading	Additonal Modifiers	Soil Class. Symbol	Lithologic Contact (ft bgs)
		→	Refusal	—			0					6" concrete over CLAYEY FILL Refusal encountered at 2 feet.	dk brown								hand auger Refusal @ 2 feet (concrete)		
5																							
												Notes: Total Depth = 2 feet											
10												• Refusal encountered at 2 feet • Groundwater not encountered during drilling • boring backfilled with native soil											

Notes:

	> 1/4 inch	visible -1/4 in.	visible with hand lens	not visible	See USCS flow Charts. Describe sand and gravel grading, ie, fine to coarse grained	Use Munsell color chart if available	Dry Moist Wet	Course: v. loose loose md. dense dense	Fines: v. soft soft md. Stiff v.stiff hard	high med low non	A Sa Sr R	in inches	poorly vs. well	odor, staining, minerology, stucture, cementation,		

Attachment 10

environ strategy consultants, inc.

BORING/WELL ID NUMBER: B-9

SUBSURFACE EXPLORATION LOG

CLIENT: Rainbow Disposal
PROJECT NUMBER: 217E
LOCATION: 17121 Nichols Street Huntington Beach, CA
SURFACE ELEVATION:

GEOLOGIST: Margaret Patrick
DATE DRILLED: September , 2005
DRILLING COMPANY: Al-Roy Drilling Inc.
NORTHING:

TOTAL DEPTH: 2 ft
DRILLING METHOD: Hollow stem auger
SAMPLE METHOD: split spoon
EASTING:

Depth (ft)	Samples	Time (24 hr)	Sample Number	FID/PID (ppm) Sample	FID/PID (ppm) Breathing Zone	Blow Count	Recovery (ft)	GEOLOGIC DESCRIPTION: % gravel	% sand	% non-plastic fines	% plastic fines	Lithologic Name	Color	Moisture	Density	Consistency	Plasticity	Angularity	Max. grain size	grading	Additonal Modifiers	Soil Class. Symbol	Lithologic Contact (ft bgs)
		——→	→ refusal									6" concrete over, clayey FILL Refusal encountered at 2 feet.	dk brown								hand auger Refusal @ 2 feet (concrete)		
5																							
10												Notes: Total Depth = 2 feet • Refusal encountered at 2 feet • Groundwater not encountered during drilling • boring backfilled with native soil											
Notes:								> 1/4 inch	visible -1/4 in.	visible with hand lens	not visible	See USCS flow Charts. Describe sand and gravel grading, ie, fine to coarse grained	Use Munsell color chart if available	Dry Moist Wet	Course: v. loose loose md. dense dense	Fines: v. soft soft md. Stiff v.stiff hard	high med low non	A Sa Sr R	in inches	poorly vs. well	odor, staining, minerology, stucture, cementation,		

Attachment 10

environ strategy consultants, inc.

BORING/WELL ID NUMBER: B-10

SUBSURFACE EXPLORATION LOG

CLIENT: Rainbow Disposal
PROJECT NUMBER: 217E
LOCATION: 17121 Nichols Street Huntington Beach, CA
SURFACE ELEVATION:

GEOLOGIST: Margaret Patrick / Laura Skoal
DATE DRILLED: September 13, 2005
DRILLING COMPANY: Al-Roy Drilling Inc.
NORTHING:

TOTAL DEPTH:
DRILLING METHOD: Hollow stem auger
SAMPLE METHOD: split spoon
EASTING:

Depth (ft)	Samples	Time (24 hr)	Sample Number	FID/PID (ppm) Sample	FID/PID (ppm) Breathing Zone	Blow Count	Recovery (ft)	% gravel	% sand	% non-plastic fines	% plastic fines	Lithologic Name	Color	Moisture	Density	Consistency	Plasticity	Angularity	Max. grain size	grading	Additonal Modifiers	Soil Class. Symbol	Lithologic Contact (ft bgs)
		→	refusal									4" Asphalt over 6" concrete CLAYEY FILL Refusal at 2 ft	Light brown								hand auger Refusal @ 2 feet (concrete)		
												Notes: Refusal during boring at approx 2 ft bgs Groundwater not encountered during drilling. boring backfilled with native											
												alternate location attempted at approx 10 ft east- refusal encountered at approx 2 ft											

Notes:

				> 1/4 inch	visible -1/4 in.	visible with hand lens	not visible	See USCS flow Charts. Describe sand and gravel grading, ie, fine to coarse grained	Use Munsell color chart if available	Dry Moist Wet	Course: v. loose loose md. dense dense	Fines: v. soft soft md. Stiff v.stiff hard	high med low non	A Sa Sr R	in inches	poorly vs. well	odor, staining, minerology, stucture, cementation,		

Attachment 10

environ strategy consultants, inc. es

BORING/WELL ID NUMBER: B-1

SUBSURFACE EXPLORATION LOG

CLIENT: Rainbow Disposal
PROJECT NUMBER: 217E
LOCATION: 17121 Nichols Street Huntington Beach, CA
SURFACE ELEVATION:

GEOLOGIST: Margaret Patrick / LAURA (...)
DATE DRILLED: September 12, 2005
DRILLING COMPANY: Al-Roy Drilling Inc.
NORTHING:

TOTAL DEPTH: 50 ft
DRILLING METHOD: Hollow stem auger
SAMPLE METHOD: split spoon / 140 lb. hammer
EASTING:

Depth (ft)	Samples	Time (24 hr)	Sample Number	FID/PID (ppm) Sample	FID/PID (ppm) Breathing Zone	Blow Count	Recovery (ft)	% gravel	% sand	% non-plastic fines	% plastic fines	Lithologic Name	Color	Moisture	Density	Consistency	Plasticity	Angularity	Max. grain size	grading	Additonal Modifiers	Soil Class. Symbol	Lithologic Contact (ft bgs)
												8" asphalt,											
												ALLUVIUM											
5			B-1/SPT-1	8.5	<5	3 5 5	1.5					CLAY,	Brown	SL moist	–	firm	med			med		CL	
			B-1/SPT-2	<5	<5							CLAY	Brown	dry-damp	–	Stiff	low			poor		CL	
10			B-1/SPT-3	<5	<5	4 9 12	1.5					CLAYEY SILT	light brown	SL moist		Stiff	low			F		ML	
15			B-1/SPT-4		Boring Started 12:30	11 7 10	1.5					SAME AS ABOVE								P		ML	
20			B-1/SPT-5	12-1 <5	<5	4 10 10	1.5					SILT, over Sandy, V. fine grained (6 inch layer), over SILT.	light brown	SL Moist	–	Stiff	non		fn	med		ML	
25						3 10 14	1.5															CL ML	
30			(continued)																				

Notes:

	> 1/4 inch	visible - 1/4 in.	visible with hand lens	not visible	See USCS flow Charts. Describe sand and gravel grading, ie, fine to coarse grained	Use Munsell color chart if available	Dry Moist Wet	Course: v. loose loose md. dense dense	Fines: v. soft soft md. Stiff v.stiff hard	high med low non	A Sa Sr R	in inches	poorly vs. well	odor, staining, minerology, stucture, cementation,

Attachment 10

APPENDIX B

PTS Laboratories

Environ Strategy
PTS File No: 35562

Project Name: Rainbow Disposal
Project No.: 217 E

TEST PROGRAM

CORE ID	Depth ft.	Number of Containers	Moisture Content ASTM D2216	Bulk Density ASTM D2937	Consolidation ASTM D2435	Direct Shear ASTM D3080	Expansion Index ASTM D4829	HOLD	Notes
		Plugs:	Grab	Bulk	Whole Core	Whole Core	Whole Core		
B-1/SPT-1	6	1						X	Consolidation:0.5,1.0,2.0 H2O 4.0,8.0, 0.5 ksf
B-1/SPT-2	11	1						X	
B-1/SPT-3	16	1						X	Direct Shear: 0.5, 1.0, 2.0 Ksf
B-1/SPT-4	21	1						X	
B-1/SPT-5	26	1						X	
B-1/SPT-6	31	1						X	
B-1/SPT-7	36	1						X	
B-1/SPT-8	41	1						X	
B-2/R-1	6	1	X	X	X				
B-2/R-2	11	1	X	X				X	
B-2/R-3	16	1	X	X	X				
B-2/R-4	21	1	X	X	X				
B-2/SPT-1	26	1						X	
B-2/SPT-2	31	1						X	
B-2/SPT-3	36	1						X	
B-2/SPT-4	41	1						X	
B-3/R-1	6	1	X	X		X			
B-3/R-2	11	1	X	X					
B-3/R-3	16	1	X	X					
B-3/SPT-1	21	1						X	
B-3/SPT-2	26	1						X	
B-4/R-1	8	1	X	X		X			
B-4/R-2	13	1	X	X					
B-4/R-3	18	1	X	X	X				

Attachment 10

PTS Laboratories

Environ Strategy
PTS File No: 35562

Project Name: Rainbow Disposal
Project No.: 217 E

TEST PROGRAM

CORE ID	Depth ft.	Number of Containers	Moisture Content ASTM D2216	Bulk Density ASTM D2937	Consolidation ASTM D2435	Direct Shear ASTM D3080	Expansion Index ASTM D4829	HOLD	Notes
		Plugs:	Grab	Bulk	Whole Core	Whole Core	Whole Core		
B-4/SPT-1	23	1						X	
B-5/R-1	6	1						X	
B-5/R-2	1	1						X	
B-5/R-3	16	1						X	
B-5/SPT-1	21	1						X	
B-5/SPT-2	26	1						X	
B-7/R-1	6	1	X	X	X				
B-7/R-2	11	1	X	X					
B-7/R-3	16	1	X	X	X				
B-7/SPT-1	20	1						X	
B-7/SPT-2	25	1						X	
Bulk Sample B-1	15-25	1						X	
Bulk Sample B-2	25-35	1						X	
Bulk Sample B-7	10-20	1						X	
Bulk Sample B-5	10-20	1						X	
B-11/R-1	6	1	X	X	X				
B-11/R-2	11	1	X	X					
B-11/R-3	16	1	X	X					
B-11/SPT-1	20	1						X	
B-12/R-1	6	1						X	
B-12/R-2	11	1						X	
B-12/R-3	15	1						X	
B-12/SPT-1	20	1						X	
B-13/R-1	6	1						X	

Attachment 10

Project Name: Rainbow Disposal
Project No.: 217 E

TEST PROGRAM

CORE ID	Depth ft.	Number of Containers	Moisture Content ASTM D2216	Bulk Density ASTM D2937	Consolidation ASTM D2435	Direct Shear ASTM D3080	Expansion Index ASTM D4829	HOLD	Notes
		Plugs:	Grab	Bulk	Whole Core	Whole Core	Whole Core		
B-13/R-2	11	1						X	
B-13/R-3	16	1						X	
B-13/SPT-1	20	1						X	
B-14/R-1	6	1	X	X	X				
B-14/R-2	11	1	X	X					
B-14/R-3	16	1	X	X					
B-14/SPT-1	20	1						X	
B-15/R-1	6	1	X	X					
B-15/R-2	11	1	X	X	X				
B-15/R-3	15	1	X	X					
B-15/SPT-1	20	1						X	
B-16/R-1	6	1						X	
B-16/R-2	11	1						X	
B-16/R-3	15	1						X	
B-16/SPT-1	20	1						X	
B-17/R-1	5	1						X	
B-17/R-2	10	1						X	
B-17/R-3	15	1						X	
B-17/SPT-1	20	1						X	
B-18/R-1	5	1						X	
B-18/R-2	10	1						X	
B-18/R-3	15	1						X	
B-18/SPT-1	20	1						X	
Bulk Sample B-13	10-20	1						X	

Attachment 10

Project Name: Rainbow Disposal
Project No.: 217 E

TEST PROGRAM

CORE ID	Depth ft.	Number of Containers	Moisture Content ASTM D2216	Bulk Density ASTM D2937	Consolidation ASTM D2435	Direct Shear ASTM D3080	Expansion Index ASTM D4829	HOLD	Notes
		Plugs:	Grab	Bulk	Whole Core	Whole Core	Whole Core		
Bulk Sample B-14	10-20	1						X	
CNG Dispenser Front	2-5	1					X		
TOTALS:		74	22	22	9	2	1	52	

Laboratory Test Program Notes
Sample locations to be picked from core photos by Environ Strategy personnel.

Unit Cost, $	12.00	25.00	354.00	630.00	264.00	5.00
Test Total, $	264.00	550.00	3186.00	1260.00	264.00	260.00
Sample Disposal, $	148.00					
EDD, $	5.00					
Est. Project Total, $	5937.00					

Attachment 10

DATE | PTS FILE# | **CHAIN OF CUSTODY RECORD** | PAGE 1 OF 1

COMPANY: ENVIRON STRATEGY
ADDRESS: 30 HUGHES
PROJECT MANAGER: MARGARET PATRICK
PROJECT NAME: RAINBOW DISPOSAL
PHONE NUMBER: 949-581-3222
PROJECT NUMBER: 217 E
FAX NUMBER:
SITE LOCATION: HUNTINGTON BEACH
SAMPLER SIGNATURE: Laura Hunter

PO# 217 E

SPECIAL HANDLING
24 HOURS 5 DAYS
72 HOURS NORMAL
OTHER

SAMPLE CONDITIONS
RECEIVED ON ICE YES/NO
SEALED YES/NO
OTHER YES/NO

COMMENTS

ANALYSIS REQUEST

SAMPLE ID NUMBER	DATE	TIME	DEPTH, FT	MOISTURE CONTENT, ASTM D2216	BULK DENSITY, API RP40	Hold for Analysis	Consolidation 0.5-1.0-2.0 H2O 4.0-8.0	NUMBER OF SAMPLES
B-1/SPT-1	9/12/05		6			X		1
B-1/SPT-2	"		10					1
B-1/SPT-3	"		16					1
B-1/SPT-4	"		21					1
B-1/SPT-5	"		26					1
B-1/SPT-6	"		31					1
B-1/SPT-7	"		36					1
B-1/SPT-8	"		41					1
B-2/R-1	"		6	X	X		X	1
B-2/R-2	"		11	X	X			1
B-2/R-3	↓		16	X	X		X	1

1. RELINQUISHED BY	2. RECEIVED BY	3. RELINQUISHED BY	4. RECEIVED BY
COMPANY: ESCI	COMPANY: PTS GEOLABS	COMPANY:	COMPANY:
DATE: 9/13/05 TIME: 16:05	DATE: 9/13/05 TIME: 1600	DATE: TIME:	DATE: TIME:

Attachment 10

PTS GeoLabs, Inc. • 8100 Secura Way • Santa Fe Springs, CA 90670 • Phone (562) 907-3607 • Fax (562) 907-3610
PTS GeoLabs, Inc. • 4342 W. 12th St. • Houston, TX 77055 • Phone (713) 680-2291 • Fax (713) 680-0763

ATE PTS FILE# **CHAIN OF CUSTODY RECORD** PAGE 2 OF 7

OMPANY	ENVIRON STRATEGY
DDRESS	30 HUGHES SUITE 209
ROJECT MANAGER	MARGARET PATRICK
ROJECT NAME	RAINBOW DISPOSAL
PHONE NUMBER	949-581 3222
PROJECT NUMBER	217 E
FAX NUMBER	
SITE LOCATION	HUNTINGTON BEACH
SAMPLER SIGNATURE	Laura Stipp

ANALYSIS REQUEST

SAMPLE ID NUMBER	DATE	TIME	DEPTH, FT	PHYSICAL PROPERTIES PACKAGE, API RP40	MOISTURE CONTENT, ASTM D2216	POROSITY, API RP40	GRAIN DENSITY, API RP40	BULK DENSITY, API RP40	AIR PERMEABILITY, API RP40	SPECIFIC RETENTION/YIELD ASTM D425	CAPILLARY PRESSURE, ASTM D425M	SOIL pH, EPA 9045	GRAIN SIZE: DRY; 400 MESH	GRAIN SIZE: SIEVE & LASER	GRAIN SIZE: LASER; 1 MICRON	HYDRAULIC CONDUCTIVITY, EPA 9100, API RP40	TOC: WALKLEY-BLACK	HYDRAULIC CONDUCTIVITY PACKAGE	ATTERBERG LIMITS, ASTM D4318	TNRCC PROPERTIES PACKAGE	Hold For Analysis	Consolidation 0.5-1.0-2.0 ksf H2O 4-8-05	Direct Shear 0.5-1.0-2.0 ksf 3080	NUMBER OF SAMPLES
B-2 / R-4	9/12/05		21		X			X													X	X		1
B-2 / SPT-1	9/12/05		26																		X			1
B-2 / SPT-2	9/12/05		31																		X			1
B-2 / SPT-3	9/12/05		36																		X			1
B-2 / SPT-4	9/12/05		41																		X			1
B-3 / R-1	9/12/05		6		X			X															X	1
B-3 / R-2	9/12/05		11		X			X																1
B-3 / R-3	9/12/05		16		X			X																1
B-3 / SPT-1	9/12/05		21																		X			1
B-3 / SPT-2	9/12/05		26																		X			1
B-4 / R-1	9/12/05		8		X			X														X	X	1

PO# 217 E

SPECIAL HANDLING

24 HOURS 5 DAYS
72 HOURS NORMAL
OTHER

SAMPLE CONDITIONS

RECEIVED ON ICE YES/NO
SEALED YES/NO
OTHER YES/NO

COMMENTS

1. RELINQUISHED BY	2. RECEIVED BY	3. RELINQUISHED BY	4. RECEIVED BY
COMPANY ESCI	COMPANY PTS LABS	COMPANY	COMPANY
DATE 9/13/05 TIME 1400	DATE 9/13/05 TIME 1600	DATE TIME	DATE TIME

Attachment 10

DATE **PTS FILE#** **CHAIN OF CUSTODY RECORD** **PAGE 3 OF 4**

COMPANY: ENVIRON STRATEGY
ADDRESS: 30 HUGHES
PROJECT MANAGER: MARGARET PATRICK 949-581-3222
PROJECT NAME: RAINBOW DISPOSAL PHONE NUMBER
PROJECT NUMBER: 217 E. FAX NUMBER
SITE LOCATION: HUNTINGTON BEACH
SAMPLER SIGNATURE:

PO# 217 E

SPECIAL HANDLING
24 HOURS 5 DAYS
72 HOURS NORMAL
OTHER

SAMPLE CONDITIONS
RECEIVED ON ICE YES/NO
SEALED YES/NO
OTHER YES/NO

COMMENTS

ANALYSIS REQUEST

SAMPLE ID NUMBER	DATE	TIME	DEPTH, FT	PHYSICAL PROPERTIES PACKAGE, API RP40	MOISTURE CONTENT, ASTM D2216	POROSITY, API RP40	GRAIN DENSITY, API RP40	BULK DENSITY, API RP40	AIR PERMEABILITY, API RP40	SPECIFIC RETENTION/YIELD ASTM D425	CAPILLARY PRESSURE, ASTM D425M	SOIL pH, EPA 9045	GRAIN SIZE: DRY; 400 MESH	GRAIN SIZE: SIEVE & LASER	GRAIN SIZE: LASER; 1 MICRON	HYDRAULIC CONDUCTIVITY, EPA 9100, API RP40	TOC: WALKLEY-BLACK	HYDRAULIC CONDUCTIVITY PACKAGE	ATTERBERG LIMITS, ASTM D4318	TNRCC PROPERTIES PACKAGE	Hold for Analysis	Consolidation 0.5-1.0-2.0 kgf	Direct Shear 0.5-1.0-2.0 kgf	NUMBER OF SAMPLES
B-4 / R-2	9/12/05		13		X			X																1
B-4 / R-3	9/12/05		18		X			X														X		1
B-4 / SPT-1	9/12/05		23																		X			1
B-5 / R-1	9/12/05		6																		X			1
B-5 / R-2	9/12/05		11																		X			1
B-5 / R-3	9/12/05		16																		X			1
B-5 / SPT-1	9/12/05		21																		X			1
SB-5 / SPT-2	9/12/05		26																		X			1
B-7 / R-1	9/12/05		6		X			X														X	X	1
SB-7 / R-2	9/12/05		11		X			X																1
SB-7 / R-3	9/12/05		16		X			X														X		1

1. RELINQUISHED BY	2. RECEIVED BY	3. RELINQUISHED BY	4. RECEIVED BY
COMPANY: CSCE	COMPANY: PTS LABS	COMPANY:	COMPANY:
DATE: 9/13/05 TIME: 1605	DATE: 9/13/05 TIME: 1600	DATE: TIME:	DATE: TIME:

Attachment 10

PTS GeoLabs, Inc. • 8100 Secura Way • Santa Fe Springs, CA 90670 • Phone (562) 907-3607 • Fax (562) 907-3610
PTS GeoLabs, Inc. • 4342 W. 12th St. • Houston, TX 77055 • Phone (713) 680-2291 • Fax (713) 680-0763

DATE **PTS FILE#** **CHAIN OF CUSTODY RECORD** **PAGE** 4 **OF** 7

COMPANY	Environ Strategy
ADDRESS	30 Hughes, Ste 209
PROJECT MANAGER	Margaret Patrick
PHONE NUMBER	949-581-3222
PROJECT NAME	Rainbow Disposal
PROJECT NUMBER	217 E
FAX NUMBER	
SITE LOCATION	Huntington Beach
SAMPLER SIGNATURE	

ANALYSIS REQUEST

SAMPLE ID NUMBER	DATE	TIME	DEPTH, FT	PHYSICAL PROPERTIES PACKAGE, API RP40	MOISTURE CONTENT, ASTM D2216	POROSITY, API RP40	GRAIN DENSITY, API RP40	BULK DENSITY, API RP40	AIR PERMEABILITY, API RP40	SPECIFIC RETENTION/YIELD ASTM D425	CAPILLARY PRESSURE, ASTM D425M	SOIL pH, EPA 9045	GRAIN SIZE: DRY; 400 MESH	GRAIN SIZE: SIEVE & LASER	GRAIN SIZE: LASER; 1 MICRON	HYDRAULIC CONDUCTIVITY, EPA 9100, API RP40	TOC: WALKLEY-BLACK	HYDRAULIC CONDUCTIVITY PACKAGE	ATTERBERG LIMITS, ASTM D4318	TNRCC PROPERTIES PACKAGE	H_2O 4-8-0	NUMBER OF SAMPLES
B-7 / SPT - 1	9/12/05		20																	X	Hold for analysis	1
B-7 / SPT - 2	9/12/05		25																			1
Bulk Sample B-1	9/12/05		15-25																			1
Bulk Sample B-2	9/12/05		25-35																			1
Bulk Sample B-7	9/12/05		10-20																			1
Bulk Sample B-5	9/12/05		10-20																			1
B-11 / R-1	9/13/05		6		X			X													Consolidation 0.5-1.0-2.0 ksf	1
B-11 / R-2	9/13/05		11		X			X														1
B-11 / R-3	9/13/05		16		X			X														1
B-11 / SPT - 1	9/13/05		20																	X		1
B-12 / R-1	9/13/05		6																	X		1

PO# 217 E

SPECIAL HANDLING

24 HOURS 5 DAYS
72 HOURS NORMAL
OTHER

SAMPLE CONDITIONS

RECEIVED ON ICE YES/NO
SEALED YES/NO
OTHER YES/NO

COMMENTS

1. RELINQUISHED BY	2. RECEIVED BY	3. RELINQUISHED BY	4. RECEIVED BY
COMPANY: ESE	COMPANY: PTS Labs	COMPANY:	COMPANY:
DATE: 9/13/05 TIME: 1605	DATE: 9/13/05 TIME: 1600	DATE: TIME:	DATE: TIME:

Attachment 10

DATE PTS FILE# CHAIN OF CUSTODY RECORD PAGE 3 OF 7

COMPANY: Environ Strategy

ADDRESS: 30 Hughes 525 209 CITY ZIP CODE

PROJECT MANAGER: Margaret Patrick 949-581-3222

PROJECT NAME: Rainbow Disposal PHONE NUMBER

PROJECT NUMBER: 217 E FAX NUMBER

SITE LOCATION: Huntington Beach

SAMPLER SIGNATURE: [signature]

PO# 217 E

SPECIAL HANDLING

24 HOURS 5 DAYS
72 HOURS NORMAL
OTHER

SAMPLE CONDITIONS

RECEIVED ON ICE YES/NO
SEALED YES/NO
OTHER YES/NO

COMMENTS

ANALYSIS REQUEST

SAMPLE ID NUMBER	DATE	TIME	DEPTH, FT	PHYSICAL PROPERTIES PACKAGE, API RP40	MOISTURE CONTENT, ASTM D2216	POROSITY: TOTAL, API RP40	GRAIN DENSITY, API RP40	BULK DENSITY (DRY), API RP40	AIR PERMEABILITY, API RP40	SPECIFIC RETENTION/YIELD ASTM D425	CAPILLARY PRESSURE, ASTM D425M	SOIL pH, EPA 9045	POROSITY: EFFECTIVE, ASTM D425M	TCEQ/TNRCC PROPERTIES PACKAGE	GRAIN SIZE DISTRIBUTION, ASTM D422/4464M	HYDRAULIC CONDUCTIVITY, EPA 9100, API RP40	TOC: WALKLEY-BLACK	HYDRAULIC CONDUCTIVITY PACKAGE	ATTERBERG LIMITS, ASTM D4318	Consolidation 0.5-1.0-2.0 ksf Rnd 4-8	Direct Shear 0.5-1.0-2.0 ksf	Hold			NUMBER OF SAMPLES
B-12 / R-2	9/12/05		11																						
B-12 / R-3	9/13/05		15																						
B-12 / SPT-1	9/13/05		20																						
B-13 / R-1	9/13/05		6																						
B-13 / R-2	9/13/05		11																						
B-13 / R-3	9/13/05		16																						
B-13 / SPT-1	9/13/05		20																						
B-14 / R-1	9/13/05		6		X			X												X	X				
B-14 / R-2	9/13/05		11		X			X																	
B-14 / R-3	9/13/05		16		X			X																	
B-14 / SPT-1	9/13/05		20																			X			

1. RELINQUISHED BY	2. RECEIVED BY	3. RELINQUISHED BY	4. RECEIVED BY
COMPANY: ESE	COMPANY: PTS Labs	COMPANY:	COMPANY:
DATE: 9/13/05 TIME: 1600	DATE: 9/13/05 TIME: 1600	DATE: TIME:	DATE: TIME:

Attachment 10

DATE **PTS FILE#** **CHAIN OF CUSTODY RECORD** **PAGE 6 OF 7**

COMPANY	Fluor Strategy
ADDRESS	30 Hughes, Ste 209
PROJECT MANAGER	Margaret J Patrick 949-581-3122
PROJECT NAME / PHONE NUMBER	Rainbow Disposal
PROJECT NUMBER / FAX NUMBER	217E
SITE LOCATION	Huntington Beach
SAMPLER SIGNATURE	

ANALYSIS REQUEST

PO# 217 E

SPECIAL HANDLING: 24 HOURS / 72 HOURS / 5 DAYS / NORMAL (circled) / OTHER

SAMPLE CONDITIONS: RECEIVED ON ICE YES/NO; SEALED YES/NO; OTHER YES/NO (circled) Ambient

SAMPLE ID NUMBER	DATE	TIME	DEPTH, FT	PHYSICAL PROPERTIES PACKAGE, API RP40	MOISTURE CONTENT, ASTM D2216	POROSITY, API RP40	GRAIN DENSITY, API RP40	BULK DENSITY, API RP40	AIR PERMEABILITY, API RP40	SPECIFIC RETENTION/YIELD ASTM D425	CAPILLARY PRESSURE, ASTM D425M	SOIL pH, EPA 9045	GRAIN SIZE: DRY; 400 MESH	GRAIN SIZE: SIEVE & LASER	GRAIN SIZE: LASER; 1 MICRON	HYDRAULIC CONDUCTIVITY, EPA 9100, API RP40	TOC: WALKLEY-BLACK	HYDRAULIC CONDUCTIVITY PACKAGE	ATTERBERG LIMITS, ASTM D4318	TNRCC PROPERTIES PACKAGE	Hold for Analysis	Consolidation 0.5-1.0-2.0 ksf Hyd			NUMBER OF SAMPLES	COMMENTS
B-15/R-1	9/13/05		6		X			X																	1	
B-15/R-2	9/13/05		11		X			X														X			1	
B-15/R-3	9/13/05		15		X			X																	1	
B-15/SPT-1	9/13/05		20																	X					1	
B-16/R-1	9/13/05		6																						1	
B-16/R-2	9/13/05		11																						1	
B-16/R-3	9/13/05		15																						1	
B-16/SPT-1	9/13/05		20																						1	
B-17/R-1	9/13/05		5																						1	
B-17/R-2	9/13/05		10																						1	
B-17/R-3	9/13/05		15																						1	

1. RELINQUISHED BY	2. RECEIVED BY	3. RELINQUISHED BY	4. RECEIVED BY
COMPANY: FSC	COMPANY: PTS Labs	COMPANY	COMPANY
DATE / TIME: 9/13/05 1605	DATE / TIME: 9/13/05 1610	DATE / TIME	DATE / TIME

Attachment 10

DATE PTS FILE# **CHAIN OF CUSTODY RECORD** PAGE 1 OF 1

COMPANY: ENVIRON STRATEGY
ADDRESS: 30 HUGHES, STE 209
PROJECT MANAGER: MARGARET PATRICK 949-587-3272
PROJECT NAME: RAINBOW DISPOSAL PHONE NUMBER
PROJECT NUMBER: 217-E FAX NUMBER
SITE LOCATION: HUNTINGTON BEACH
SAMPLER SIGNATURE: Laura Lowe

PO# 217-E

SPECIAL HANDLING: 24 HOURS / 72 HOURS / 5 DAYS / NORMAL (circled) / OTHER

SAMPLE CONDITIONS: RECEIVED ON ICE YES/NO; SEALED YES/NO; OTHER YES/NO — AMBIENT

ANALYSIS REQUEST

SAMPLE ID NUMBER	DATE	TIME	DEPTH, FT	Hold	COMMENTS
B-17 / SPT-1	9/13/05		20	X	
B-18 / R-1	9/13/05		5		
B-18 / R-2	9/13/05		10		
B-18 / R-3	9/13/05		15		
B-18 / SPT-1	9/13/05		20		
BULK SAMPLE B-13	9/13/05		10-20		
BULK SAMPLE B-14	9/13/05		10-20		
END					

Columns: PHYSICAL PROPERTIES PACKAGE, API RP40; MOISTURE CONTENT, ASTM D2216; POROSITY, API RP40; GRAIN DENSITY, API RP40; BULK DENSITY, API RP40; AIR PERMEABILITY, API RP40; SPECIFIC RETENTION/YIELD ASTM D425; CAPILLARY PRESSURE, ASTM D425M; SOIL pH, EPA 9045; GRAIN SIZE: DRY; 400 MESH; GRAIN SIZE: SIEVE & LASER; GRAIN SIZE: LASER; 1 MICRON; HYDRAULIC CONDUCTIVITY, EPA 9100, API RP40; TOC: WALKLEY-BLACK; HYDRAULIC CONDUCTIVITY PACKAGE; ATTERBERG LIMITS, ASTM D4318; TNRCC PROPERTIES PACKAGE; NUMBER OF SAMPLES

1. RELINQUISHED BY	2. RECEIVED BY	3. RELINQUISHED BY	4. RECEIVED BY
COMPANY: ECE	COMPANY: PTS LABS	COMPANY:	COMPANY:
DATE: 9/13/05 TIME: 16:00	DATE: 9/13/05 TIME: 1600	DATE: TIME:	DATE: TIME:

Attachment 10

PTS GeoLabs, Inc. • 8100 Secura Way • Santa Fe Springs, CA 90670 • Phone (562) 907-3607 • Fax (562) 907-3610
PTS GeoLabs, Inc. • 4342 W. 12th St. • Houston, TX 77055 • Phone (713) 680-2291 • Fax (713) 680-0763

APPENDIX C

DRY BULK DENSITY OF IN-PLACE SOIL

PROJECT NAME: Rainbow Disposal
PROJECT NO: 217 E

		METHODOLOGY:	Measured	ASTM D 2216/ASTM D 2937		
SAMPLE ID.	DEPTH, ft.	SAMPLE VOLUME, cc	MOISTURE CONTENT (% wt)	VOLUMETRIC WATER CONTENT, FRACTION Vb	DRY BULK DENSITY, g/cc
B-2/R-1	6	33.21	15.1	0.269	1.79
B-2/R-2	11	33.21	22.9	0.352	1.54
B-2/R-3	16	122.92	21.9	0.351	1.60
B-2/R-4	21	112.00	24.4	0.387	1.59
B-3/R-1	6	75.37	48.7	0.889	1.83
B-3/R-2	11	97.05	25.3	0.404	1.60
B-3/R-3	16	111.93	31.2	0.444	1.43
B-4/R-1	8	77.21	32.2	0.456	1.42
B-4/R-2	13	111.78	25.3	0.374	1.48
B-4/R-3	18	113.98	11.9	0.176	1.48
B-7/R-1	6	95.00	18.2	0.328	1.80
B-7/R-2	11	109.07	23.4	0.373	1.60
B-7/R-3	16	111.12	28.5	0.405	1.42
B-11/R-1	6	111.35	7.0	0.113	1.62
B-11/R-2	11	128.84	8.6	0.145	1.68
B-11/R-3	16	174.19	16.0	0.187	1.17
B-14/R-1	6	123.26	18.3	0.308	1.68
B-14/R-2	11	33.21	25.5	0.372	1.46
B-14/R-3	16	108.55	23.1	0.357	1.54
B-15/R-1	6	33.21	20.6	0.353	1.71

*Vb=Bulk Volume

DRY BULK DENSITY OF IN-PLACE SOIL

PROJECT NAME: Rainbow Disposal
PROJECT NO: 217 E

METHODOLOGY: **Measured** **ASTM D 2216/ASTM D 2937**

SAMPLE ID.	DEPTH, ft.	SAMPLE VOLUME, cc	MOISTURE CONTENT (% wt)	VOLUMETRIC WATER CONTENT, FRACTION Vb	DRY BULK DENSITY, g/cc
B-15/R-2	11	109.07	19.6	0.318	1.62
B-15/R-3	15	120.61	22.7	0.333	1.46

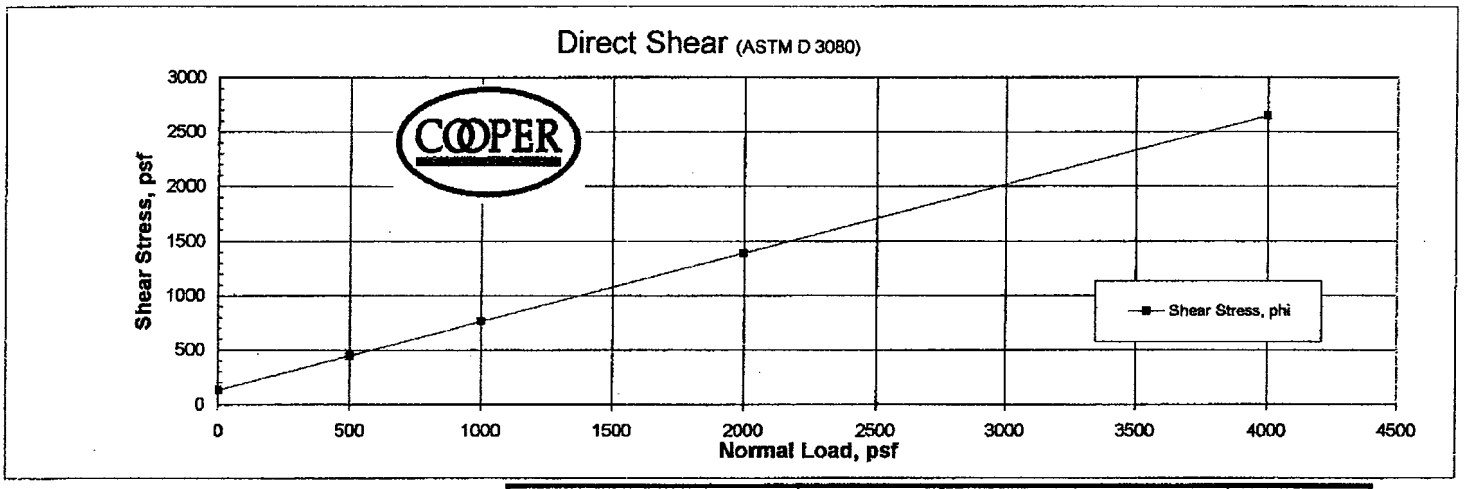
*Vb=Bulk Volume

APPENDIX D

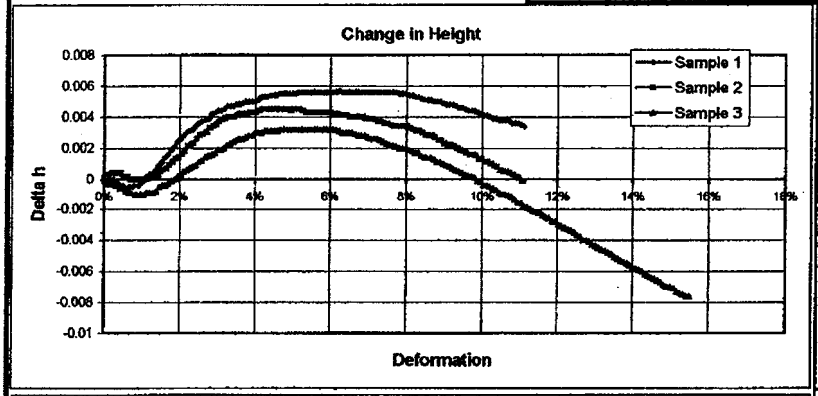
DIRECT SHEAR

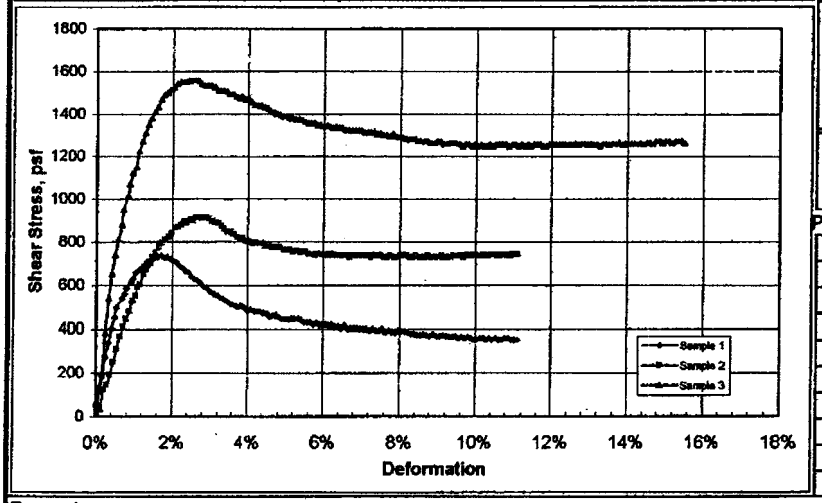
Methodology: ASTM D3080

PROJECT NAME: Rainbow Disposal
PROJECT NO: 217 E



P. Phi (degrees)	32.2	Ult. phi (degrees)	32.2
P. Cohesion (psf)	135	Ult.Cohesion (psf)	135





	Sample Data			
Initial	**1**	**2**	**3**	**4**
Moisture	16.3%	16.3%	16.3%	
Dry Density, p	114.0	113.6	114.8	
Void Ratio	0.51	0.51	0.49	
Saturation %	88.7	87.9	90.7	
Diameter, in.	2.42	2.42	2.42	
Height, in.	1.00	1.00	1.00	
	After Test			
Moisture	18.9%	18.1%	18.0%	
Dry Density, p	112.6	113.6	114.8	
Void Ratio	0.52	0.51	0.49	
Saturation %	99.0	97.3	100.0	
Diameter, in.	2.42	2.42	2.42	
Height, in.	1.01	1.00	1.00	
Normal Stress	500	1000	2000	
Shear Stress,	445	764	1390	
Deformation	5%	5%	5%	
Ultimate Stress, psf				
Rate in/min.	0.0002	0.0002	0.0002	

CTL #	417-015a	**Date:**	11/16/2005
Client:	PTS Laboratories		
Project Name:	Rainbow Disposal		
Project Number	217E	**Reduced by:**	MJ

Sample #	Boring	Sample I.D.	Depth, ft.
1		B3/R-1	6
2		B3/R-1	6
3		B3/R-1	6
4			

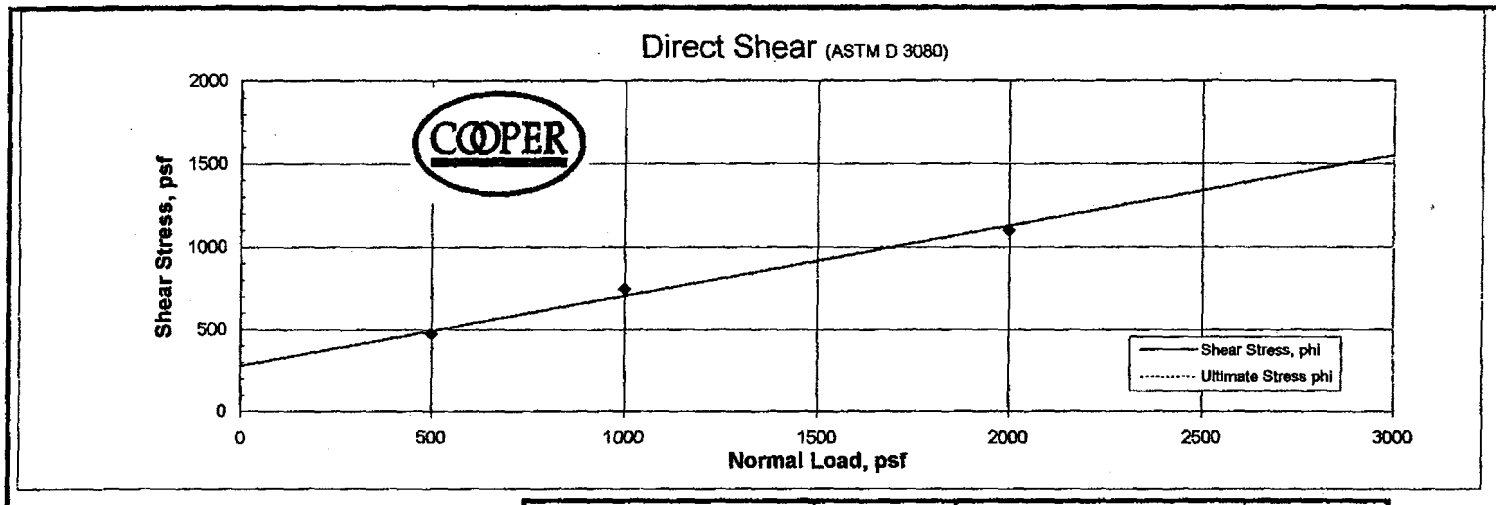
Visual Soil Classification	
1	Brown Sandy CLAY near Clayey SAND
2	Brown Sandy CLAY near Clayey SAND
3	Brown Sandy CLAY near Clayey SAND
4	

Remarks:

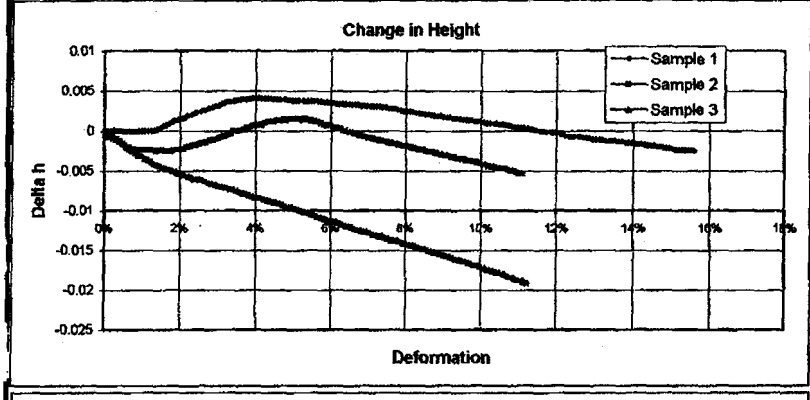
DIRECT SHEAR

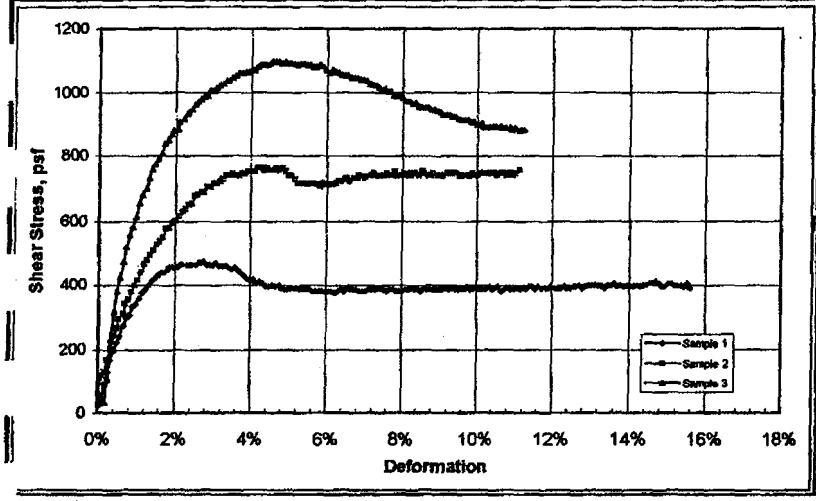
Methodology: ASTM D3080

PROJECT NAME: Rainbow Disposal
PROJECT NO: 217 E



P. Phi (degrees)	22.9	Ult. phi (degrees)	N/A
P. Cohesion (psf)	280	Ult.Cohesion (psf)	N/A





	Sample Data			
Initial	1	2	3	4
Moisture	32.2%	24.1%	33.2%	
Dry Density, p	88.4	98.5	85.6	
Void Ratio	0.94	0.74	1.00	
Saturation %	93.9	89.3	90.9	
Diameter, in.	2.43	2.42	2.43	
Height, in.	1.02	1.00	1.01	
	After Test			
Moisture	34.0%	25.7%	34.2%	
Dry Density, p	88.6	99.9	88.5	
Void Ratio	0.94	0.72	0.94	
Saturation %	99.9	98.5	99.9	
Diameter, in.	2.43	2.42	2.43	
Height, in.	1.01	0.99	0.98	
Normal Stress	500	1000	2000	
Shear Stress,	475	745	1099	
Deformation	3%	4%	5%	
Ultimate Stress, psf				
Rate in/min.	0.0002	0.0002	0.0002	

CTL #	417-015b	Date:	11/16/2005
Client:	PTS Laboratories		
Project Name:	Rainbow Laboratories		
Project Number	217E	Reduced by:	MJ

Sample #	Boring	Sample	Depth, ft.
1		B-4/R-1	8
2		B-4/R-1	8
3		B-4/R-1	8
4			

Visual Soil Classification	
1	Reddish Brown CLAY near Silty CLAY
2	Reddish Brown CLAY near Silty CLAY
3	Reddish Brown CLAY near Silty CLAY
4	

Remarks:

EXPANSION INDEX

Methodology: ASTM D4829

PROJECT NAME: Rainbow Disposal
PROJECT NO: 217 E

COOPER

Expansion Index
UBC 18-2 ___
ASTM D-4829 X

CTL Job No.:	417-015	Boring:		Date:	10/20/2005
Client:	PTS	Sample:	CNG Dispenser Front	By:	PJ
Project Name:	Rainbow Disposal	Depth:	2-5'		
Project No:	217E				
Visual Description:	Brown CLAY w/ CaCo3 pockets				

Processing:

Percent Passing #4 Sieve	
Total Air Dry Weight:	
Wt. Retained on #4 Sieve:	
% Retained	
% Passing #4 Sieve:	N/A

Sample Dimensions

Height (in.)= 1.002 Diameter (in.) = 4.002

Moisture Calcs

	Initial	Final
Tare #		
Wet Wt. + Tare, (gm)	783.3	843.7
Dry Wt. + Tare, (gm)	743.1	743.1
Tare Wt., (gm)	417.1	417.1
Wt. Of Water, (gm)	40.2	100.6
% Water	12.3	30.9

Remolding:

Tamp two lifts, 15 blows/lift @ slightly below optimum moisture content

	Initial	Final	
Ring & Sample:	754.2	814.6	grams
Ring:	388	388.0	grams
Remolded Wet Wt.:	366.2	426.6	grams
Wet Density	110.7	116.1	pcf
Dry Density	98.5	88.7	pcf
% Sat. = (2.7)(dry dens.)(m/c) / 168.48 - (dry dens.)	46.9	92.7	UBC 49<Sat%<51 / ASTM (40-60%)

Expansion Test:

Tested with 1 psi Surcharge

Date	Time	Dial	Delta h, %
10/12/2005	11:17	0.0000	0.000
10/12/2005	17:35	-0.1093	10.908
10/13/2005	8:56	-0.1107	11.048
10/13/2005	10:00	-0.1107	11.048
		Total Dial	11.0

Remarks:

Expansion Index

(initial dial - final dial) / Initial sample height x 1000

Results

Uncorrected EI = 110
Corrected EI= 107

This test is a simplified index test and may not show the full potential for expansion and/or shrinkage. Use result with caution! See ASTM D 3877

Note: Per ASTM D4829 if the degree of saturation is within the range of 40-60%, S @ 50% can be calculated as follows:

$$EI_{50} = EI_{meas} - (50 - S_{meas})$$

$$\frac{65 + EI_{meas}}{220 - S_{meas}}$$

APPENDIX F

INCREMENTAL CONSOLIDATION

Methodology: ASTM D2435

PROJECT NAME: Rainbow Disposal
PROJECT NO: 217 E

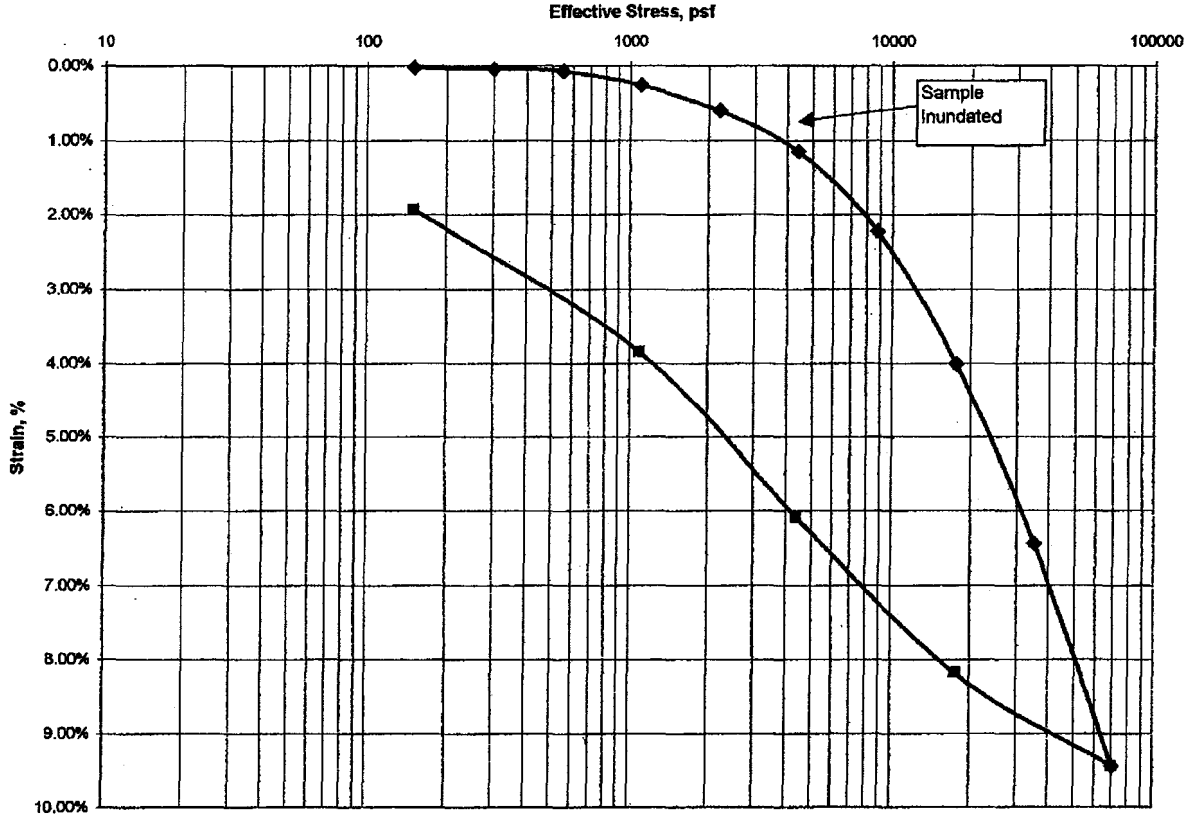
COOPER

Consolidation Test

ASTM D2435

Job No.:	417-015a	**Boring:**	B-2	**Run By:**	MD
Client:	PTS GeoLabs	**Sample:**	R-1	**Reduced:**	MJ
Project:	Rainbow Disposal - 217E	**Depth, ft.:**	5	**Checked:**	PJ
Soil Type:	Brown Sandy CLAY			**Date:**	10/30/2005

Strain-Log-P Curve



Ass. Gs = 2.8	Initial	Final
Moisture %:	16.7	17.9
Dry Density, pcf:	114.8	116.5
Void Ratio:	0.522	0.500
% Saturation:	89.3	100

Remarks: This test was performed at field moisture until after the 2200 psf load at which point it was inundated. Sample exibited a tendency to swell.

INCREMENTAL CONSOLIDATION

Methodology: ASTM D2435

PROJECT NAME: Rainbow Disposal
PROJECT NO: 217 E

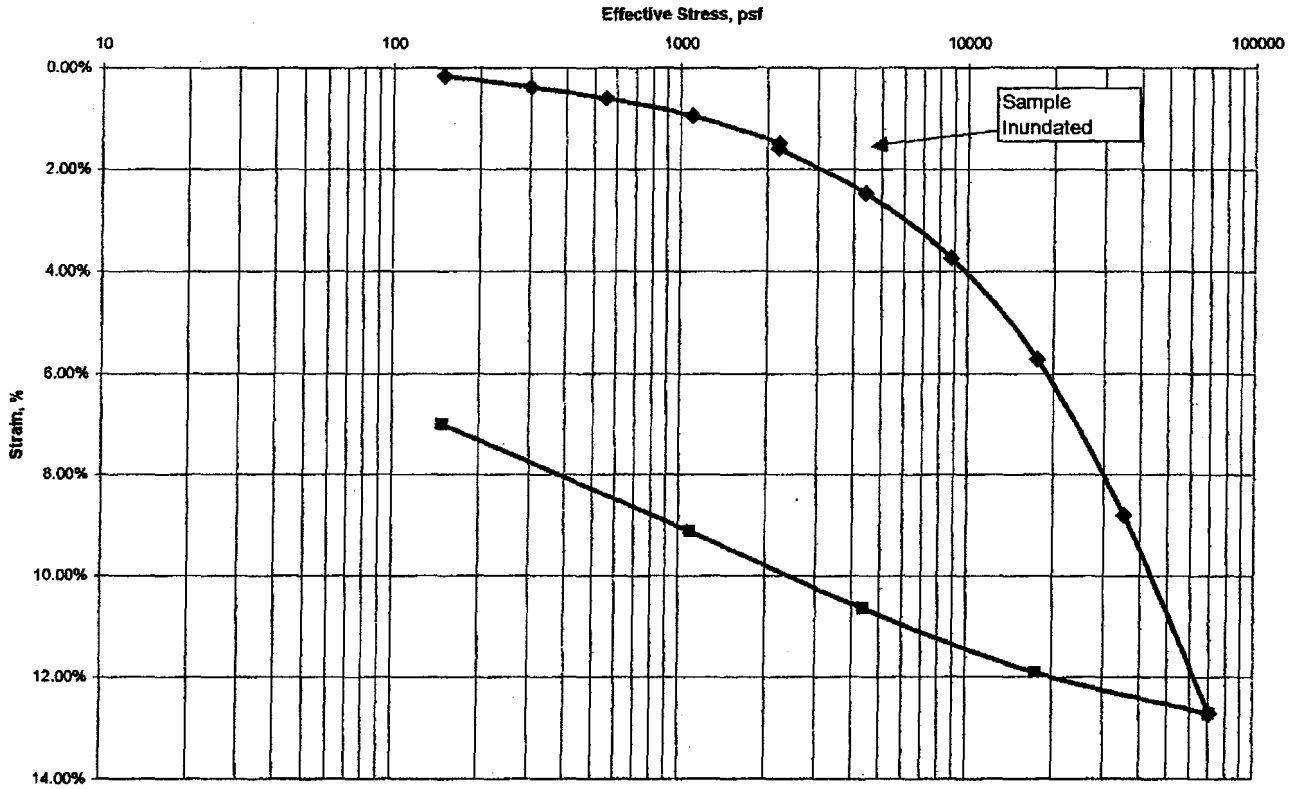
COOPER

Consolidation Test

ASTM D2435

Job No.:	417-015b	**Boring:**	B-2	**Run By:**	MD
Client:	PTS GeoLabs	**Sample:**	R-3	**Reduced:**	MJ
Project:	Rainbow Disposal - 217E	**Depth, ft.:**	15	**Checked:**	PJ
Soil Type:	Light Brown Clayey SAND Changing to Silty SAND			**Date:**	10/30/2005

Strain-Log-P Curve



Ass. Gs = 2.7	Initial	Final
Moisture %:	18.0	21.2
Dry Density, pcf:	100.5	107.3
Void Ratio:	0.678	0.571
% Saturation:	71.9	100

Remarks: This test was performed at field moisture until after the 2200 psf load at which point it was inundated.

INCREMENTAL CONSOLIDATION

Methodology: ASTM D2435

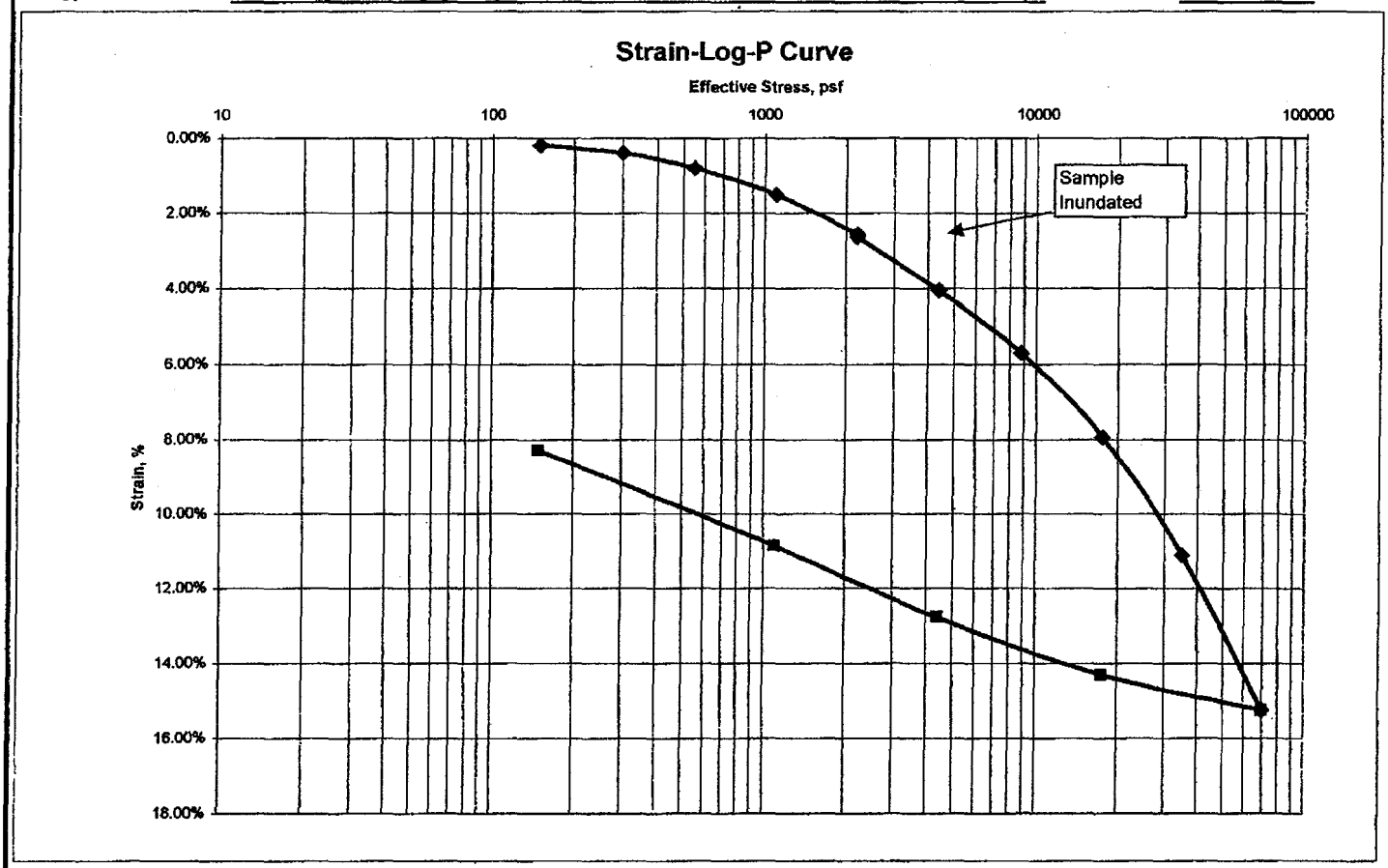
PROJECT NAME: Rainbow Disposal
PROJECT NO: 217 E

COOPER

Consolidation Test

ASTM D2435

Job No.:	417-015c	**Boring:**	B-2	**Run By:**	MD
Client:	PTS GeoLabs	**Sample:**	R-4	**Reduced:**	MJ
Project:	Rainbow Disposal - 217E	**Depth, ft.:**	20	**Checked:**	PJ
Soil Type:	Brown Sandy SILT Changing to Silty SAND			**Date:**	11/1/2005



Ass. Gs = 2.75	Initial	Final
Moisture %:	26.0	27.8
Dry Density, pcf:	92.0	97.4
Void Ratio:	0.865	0.762
% Saturation:	82.5	100

Remarks: This test was performed at field moisture until after the 2200 psf load at which point it was inundated.

INCREMENTAL CONSOLIDATION

Methodology: ASTM D2435

PROJECT NAME: Rainbow Disposal
PROJECT NO: 217 E

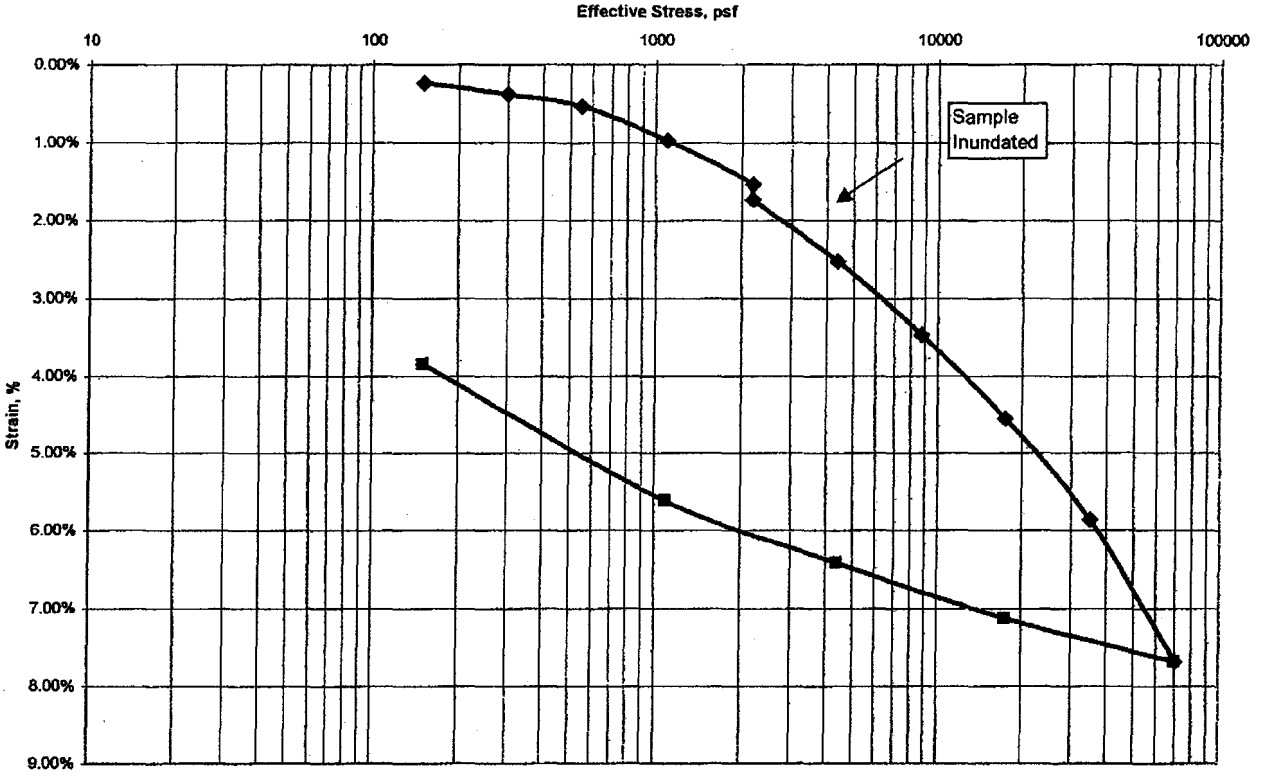
COOPER

Consolidation Test

ASTM D2435

Job No.:	417-015d	**Boring:**	B-4	**Run By:**	MD
Client:	PTS GeoLabs	**Sample:**	R-3	**Reduced:**	MJ
Project:	Rainbow Disposal - 217E	**Depth, ft.:**	17	**Checked:**	PJ
Soil Type:	Brown Silty SAND			**Date:**	10/30/2005

Strain-Log-P Curve



Ass. Gs = 2.65	Initial	Final
Moisture %:	13.5	18.5
Dry Density, pcf:	106.2	111.1
Void Ratio:	0.557	0.488
% Saturation:	64.3	100

Remarks: This test was performed at field moisture until after the 2200 psf load at which point it was inundated.

INCREMENTAL CONSOLIDATION

Methodology: ASTM D2435

PROJECT NAME: Rainbow Disposal
PROJECT NO: 217 E

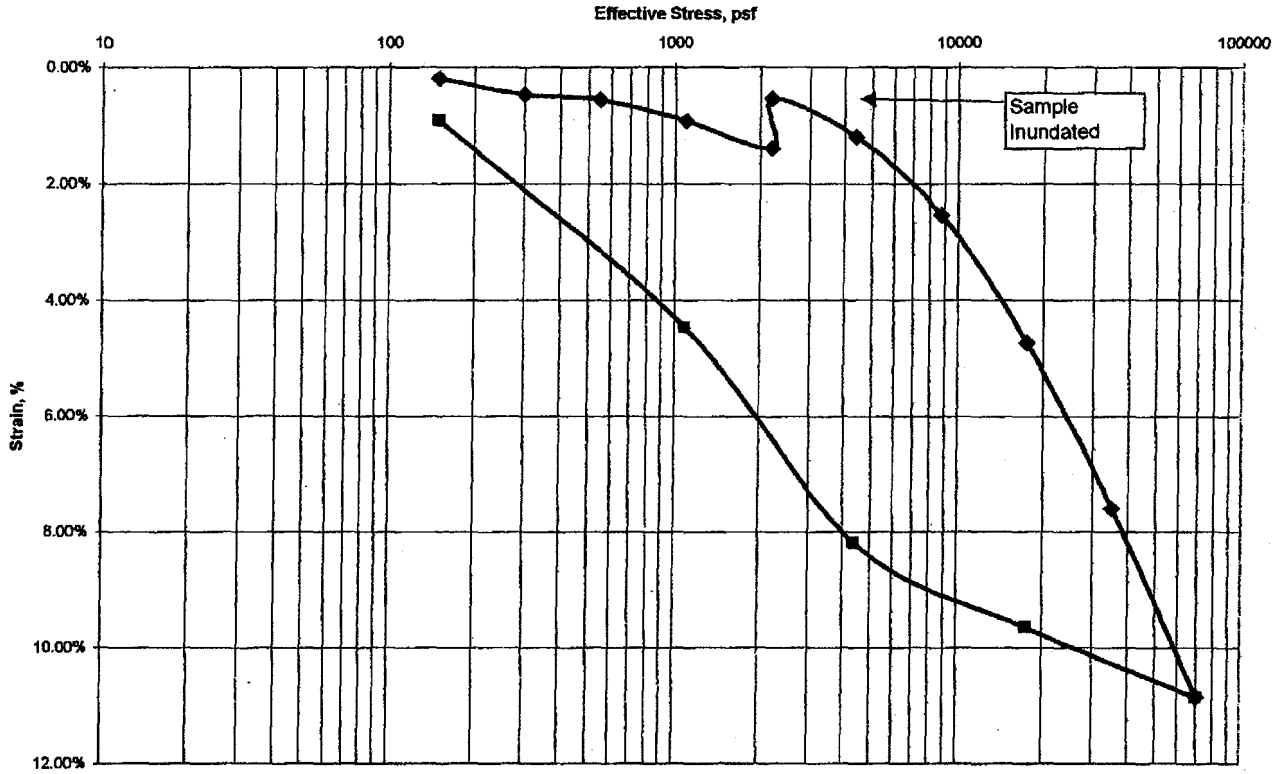
COOPER

Consolidation Test

ASTM D2435

Job No.:	417-015e	**Boring:**	B-7	**Run By:**	MD
Client:	PTS GeoLabs	**Sample:**	R-1	**Reduced:**	MJ
Project:	Rainbow Disposal - 217E	**Depth, ft.:**	6	**Checked:**	PJ
Soil Type:	Brown CLAY with Sand			**Date:**	10/30/2005

Strain-Log-P Curve



Ass. Gs = 2.8	Initial	Final
Moisture %:	17.5	20.0
Dry Density, pcf:	113.8	112.2
Void Ratio:	0.536	0.558
% Saturation:	91.3	100

Remarks: Sample exibited a tendency to swell. This test was performed at field moisture until after the 2200 psf load at which point it was inundated. Final density reported reflects the density after the sample was removed from the consolidometer and the sample was able to rebound/swell further.

INCREMENTAL CONSOLIDATION

Methodology: ASTM D2435

PROJECT NAME: Rainbow Disposal
PROJECT NO: 217 E

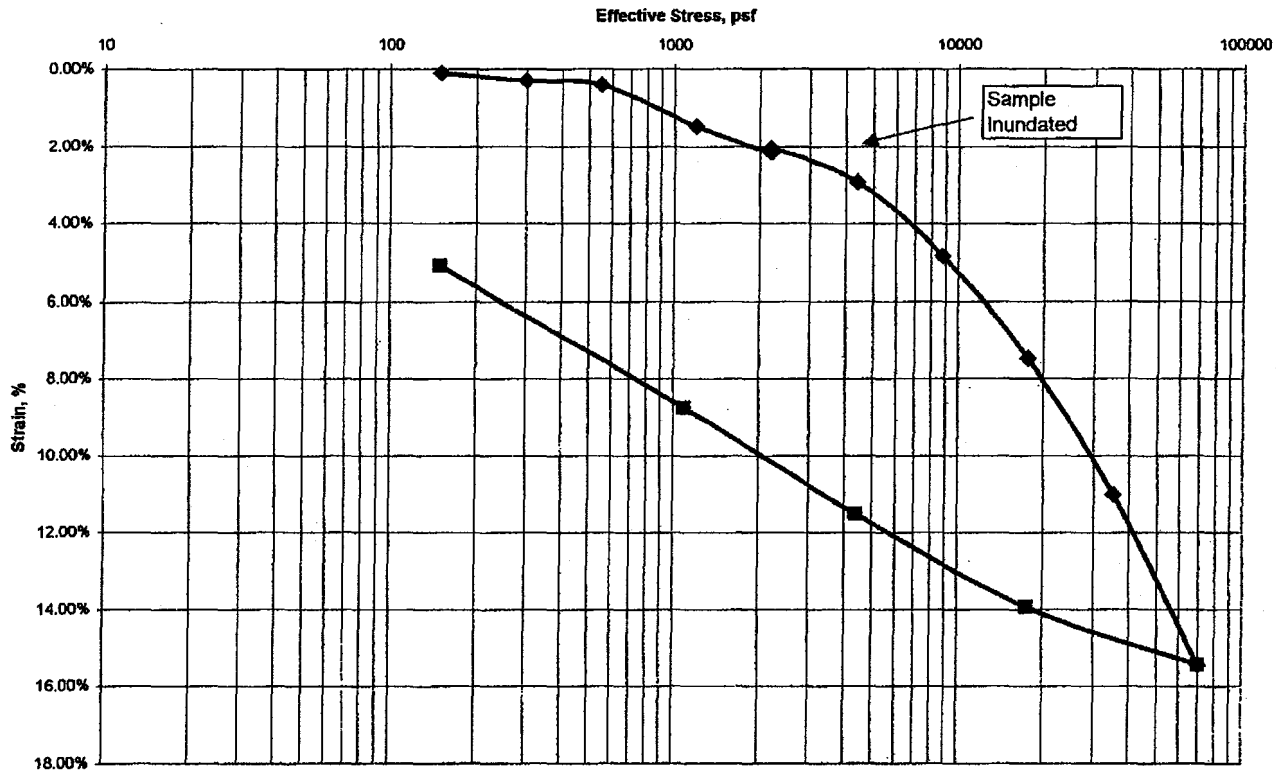
COOPER

Consolidation Test

ASTM D2435

Job No.:	417-015f	**Boring:**	B-7	**Run By:**	MD
Client:	PTS GeoLabs	**Sample:**	R-3	**Reduced:**	MJ
Project:	Rainbow Disposal - 217E	**Depth, ft.:**	15	**Checked:**	PJ
Soil Type:	Brown Sandy CLAY, trace nodules (silty)			**Date:**	11/1/2005

Strain-Log-P Curve



Ass. Gs = 2.7	Initial	Final
Moisture %:	26.5	26.0
Dry Density, pcf:	96.3	99.1
Void Ratio:	0.750	0.701
% Saturation:	95.5	100

Remarks: Sample exibited a tendency to swell. This test was performed at field moisture until after the 2200 psf load at which point it was inundated. In order to expedite the testing on this sample, the 550 psf load was applied for only 6 hrs before the next load was applied. This was done in accordance to ASTM D2435. However, it appears that time-rate consolidation characteristics were impacted by the fact that the sample had not been inundated at this point which made it prematurely appear that the

RAINBOW DISPOSAL CO., INC.
TELEPHONE LIST
APRIL 2007

EXT.	CELL	NAME	DEPARTMENT
238		Ana Lopez	Scales / Transfer
248		Angelica Tapia	MRF / Transfer
265	465-7971	Armando Duarte	Dispatch Foremen
257	403-2096	Barbara Murphy	Administration
260	465-7124	Bob Billa	Field / Safety
258	357-6981	Bruce Shuman	Administration
252		Carolina Martinez	Human Resources
251	949-697-0233	Craig Campbell	MRF / Transfer
292	448-8027	Delmy Aviles	Scales #2
270		Dina Cerda	Dispatch Customer Service
274	465-7967	Don Nickles	IT
223		Elizabeth Ochoa	Customer Service / Accounts Receivable
292	448-8027	Erica Farias	Scales #2
227	465-7962	Gus Santana	Shop
234		Jennifer Perez	Customer Service / Accounts Receivable
231	402-5896	Jerry Moffatt	Administration
244	402-4747	Jewell Hodges	Sales / Service
241	357-3111	Joaquin Rubino	Dispatch Foremen
583	465 6187	John Frixione	Field/Safety
266	357-9994	Jose Ramirez	MRF / Transfer
236		Judy Richards	Accounts Payable
229		Leo DeLeon	Assistant Controller
265	465-7969	Luis Gonzalez	Dispatch Foremen
243		Margie Gorto	Customer Service / Accounts Receivable
238		Maria Valadez	Scales / Tranfer
235		Marianne Mandel	Customer Service / Accounts Receivable
272	465-7973	Mario Fernandez	Bins / Welding
249	465-7976	Mike Grumbo	Operations
250	465-7968	Mike Ortiz	MRF / Transfer
233		Mindy Lutman	Human Resources / Payroll
264	465-7972	Octavio Camacho	Dispatch Foremen
239	465-7918	Pedro Aguirre	Bins / Welding
222		Rachel Kuiland	Dispatch Customer Service
221		Rhonda Goodman	Receptionist
230	290-1136	Ron Shenkman	Administration
275		Rosa Morales	Dispatch Customer Service
263	715-5981	Samuel Perez	Shop
		Sarah Lester	Customer Service / Accounts Receivable
263		Sotero Diaz	Shop
253	309-2438	Sue Gordon	Environmental / Public Affairs
242	222-3581	Tim Skeber	Customer Service
227	465-7966	Tony Hurtado	Shop / Rainbow Farm
247	713-2299	Walter Palencia	MRF / Transfer
232		Wendy Almodovar	Customer Service / Accounts Receivable

BOARD / CONFERENCE ROOMS	
237	Rainbow Bldg. A
267	Trailer

MISCELLANEOUS	
319-2651	ACS EMERGENCY
259	GUARD SHACK (357-0672)

OUTSIDE MESSAGE ACCESS -- PRESS ** -- FOLLOW PROMPT

CONSULTANTS	
328-9137-Cell 841-0218-Home	Bonnie Bruce
747-3459	Dave -- Brea Green Recycle
847-3256	Helen Parker
330-3676	Jeff Romacly
951-757-1531	Jim French
841-0133	Jim Sankey
842-0175	Linda Moulton-Patterson
720-9117	Wendy Weber

PRINTED ON RECYCLED PAPER

ACCOUNTS PAYABLE INVOICE REGISTER

REGISTER NO: AP-0500

VENDOR/ INVOICE NO.	DATES INVOICE	DUE	DISCOUNT	INVOICE AMOUNT	DISCOUNT	G/L ACCOUNT	DISTRIBUTION AMOUNT
WES640	WESTERN POWER & EQUIPMENT						SEP CHK?: N
	ADJUST	COMMENT:	HAND HOSE-8" HEAVY				
X73237	03/01/07	04/10		65.21-	.00		
		G/L:	Purchased Parts: SDO			6560-30-050	65.21-
		REPORT TOTAL:		65.21-	.00		65.21-

ACCOUNTS PAYABLE INVOICE REGISTER

REGISTER NO: AP-0500

ACCOUNTS PAYABLE RECAP BY DIVISION

DIVISION 00 MAIN DIVISION

G/L ACCOUNT	DESCRIPTION	DEBIT	CREDIT
2000-00-000	Accounts Payable	65.21	
6560-30-050	Purchased Parts: SDO		65.21
	DIVISION 00 TOTAL:	65.21	65.21

DAILY TRANSACTION REGISTER

POSTINGS FOR: 04/11/07

SOURCE JOURNAL	G/L ACCT		POSTING COMMENT	DEBIT	CREDIT
AP- 0500	2000-00-000	Accounts Payable	A/P INVOICE ENTRY /DIV: 00	65.21	
	6560-30-050	Purchased Parts: SDO	WESTERN POWER & EQUIPMENT/IN: X73237		65.21
			JOURNAL 0500 TOTALS:	65.21	65.21
			SOURCE AP TOTALS:	65.21	65.21
			04/11/07 TOTALS:	65.21	65.21